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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel Mignano)	App. No.: 10/764,733
)	
Invention: BACKPACK HUNTING)	Filed: January 26, 2004
BLIND FOR A TREE)	
STAND)	Group Art Unit: 3727
)	
Paper No.: 3)	Examiner: Unassigned

Mail Stop PETITIONS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

PETITION TO MAKE SPECIAL UNDER 37 CFR § 1.102

Applicant/petitioner wishes to have the above-identified application advanced out of turn for examination, and files the instant Petition To Make Special.

The above-identified patent application contains claims 7-46 directed to a single invention of a BACKPACK HUNTING BLIND FOR A TREE STAND, as required by MPEP § 708.02(VIII)(b).

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CERTIFICATE OF MAILING UNDER 37 CFR §1.8

I hereby certify that on the below indicated date this correspondence is being deposited with the United States Postal Service as FIRST CLASS MAIL in an envelope with sufficient postage addressed to: Mail Stop PETITIONS; Commissioner for Patents; P.O. Box 1450; Alexandria, VA 22313-1450

Date: 8-28-04

BY: Bernard S. Hoffman
Bernard S. Hoffman

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TABLE OF CONTENTS

FIELD OF SEARCH	1
LIST OF REFERENCES	1
DETAILED DISCUSSION	2
PRESENT INVENTION	2
37 CFR § 1.111(c)	2
37 CFR § 1.111(b)	3
U.S. PATENT APPLICATION PUBLICATION NUMBER 2003/0024559 TO FIELDS	3
U.S. PATENT APPLICATION PUBLICATION NUMBER 2003/0116183 TO HILL	4
U.S. PATENT NUMBER 3,933,164 TO NESS <i>et al.</i>	5
U.S. PATENT NUMBER 4,236,657 TO BRUNTON	6
U.S. PATENT NUMBER 4,776,503 TO SINK	7
U.S. PATENT NUMBER 5,562,236 TO MONZINGO	8
U.S. PATENT NUMBER 5,762,085 TO PUNCH	9
U.S. PATENT NUMBER 5,862,967 TO JOHNSON	10
U.S. PATENT NUMBER 5,865,355 TO CAMARA	11
U.S. PATENT NUMBER 5,927,575 TO GATLING	12
U.S. PATENT NUMBER 6,021,794 TO GUERRA	13
U.S. PATENT NUMBER 6,510,922 TO HODNETT	14
U.S. PATENT NUMBER 6,698,131 TO LATSCHAW	15



FIELD OF SEARCH

A current pre-examination search was made by a professional searcher. The field of search included, as required by *MPEP* § 708.02(VIII)(c):



CLASS(ES)	ASSOCIATED SUBCLASS(ES)
135	87, 90, 95, 96, 97, 188, 901
182	187, 188

LIST OF REFERENCES

One copy of each of the references deemed most closely related to the subject matter encompassed by the claims are submitted herewith, as required by *MPEP* § 708.02(VIII)(d), and include:

	U.S. PATENT/PUBLICATION NUMBER	PATENTEE
1	2003/0024559	Fields
2	2003/0116183	Hill
3	3,933,164	Ness <i>et al.</i>
4	4,236,657	Brunton
5	4,776,503	Sink
6	5,562,236	Monzingo
7	5,762,085	Punch
8	5,862,967	Johnson
9	5,865,355	Camara
10	5,927,575	Gatling
11	6,021,794	Guerra
12	6,510,922	Hodnett
13	6,698,131	Latschaw

DETAILED DISCUSSION

A detailed discussion of the references, which discussion points out, with the particularly required by 37 *CFR* §§ 1.111 (b) and (c), how the claimed subject matter is distinguishable over the references follows, as required by *MPEP* § 708.02(VIII)(e).

PRESENT INVENTION

The present invention teaches a combination pack and hunting blind. The hunting blind has a stowed position and a deployed position and the pack has a first surface with an open position. The hunting blind is housed in the pack when the hunting blind is in the stowed position thereof and the hunting blind is deployed from the pack when the hunting blind is in the deployed position thereof. The first surface of the pack depends from the pack when the first surface of the pack is in the open position thereof. The hunting blind extends from the pack and the first surface of the pack.

37 *CFR* § 1.111(c)

Pursuant to 37 *CFR* § 1.111(c), the claimed subject matter discloses the following advantageous distinctive features that distinguish over and avoid the prior art references:

"said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof" and "said hunting blind extends from said pack"

and said first surface of said pack.”
[Emphasis added]

37 CFR § 1.111(b)

Pursuant to 37 CFR § 1.111(b):

U.S. PATENT APPLICATION PUBLICATION NUMBER 2003/0024559 TO FIELDS

United States Patent Application Publication Number 2003/0024559 to Fields teaches a tree stand cover that includes a center fabric sheet with first and second side fabric sheets attached to opposite side edges of the center sheet. Inner surfaces of each sheet includes a blaze orange coloration for hunter safety and an outer surface having a camouflage coloration for hiding a mounted tree stand. Straps with buckles extend from free side edges of respective side fabric sheets for releasably coupling the tree stand cover to a tree or other upstanding support. The sheets may be positioned to surround and hide a tree stand already coupled to the tree. Drawstring assemblies connected to the side fabric sheets enable those sheets to be collapsed against the center fabric sheet for transport. Another drawstring assembly is connected to the center fabric sheet such that the tree stand cover may be tightened about the tree stand itself for simultaneous transport of the tree stand and cover.

Specifically, no pack is taught, let alone a combination pack and hunting blind. Absent such a disclosure, one cannot say that Fields teaches “said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof”[Emphasis added] and “said hunting blind extends from said pack and

said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention.

U.S. PATENT APPLICATION PUBLICATION NUMBER 2003/0116183 TO HILL

U.S. Patent Application Number 2003/0116183 to Hill teaches a screen housing assembly that includes a housing structure, a carrying structure, a screening structure, a screen releasing assembly, and a releasable securement structure. The housing structure can be carried and moved by a user. The carrying structure is secured to the housing structure for carrying the housing structure. The screening structure is stored internally of the housing structure. The screen releasing assembly is attached to the screening structure to allow the user to release a portion of the screening structure from internally of the housing structure to externally of the housing structure. The releasable securement structure is coupled to the screen releasing assembly to change the screen releasing assembly between a screen released position and a screen releasably secured position. The portion of the screening structure which is external of the housing structure can be used to screen off an area.

Specifically, no pack is taught, let alone a combination pack and hunting blind. Absent such a disclosure, one cannot say that Hill teaches "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention.

U.S. PATENT NUMBER 3,933,164 TO NESS *et al.*

U.S. Patent Number 3,933,164 to Ness *et al.* teaches a portable duck blind camp cot and back pack that consists of a plurality of telescoping frame sections, each having support legs to support the cot or duck blind from the ground. With the frame sections telescoped together a pair of shoulder straps on an end section permit the device to be used as a back pack. A folding cover also formed of telescopic sections is adapted to overlay the cot to form a duck blind to completely hide the hunter and yet be quickly and easily removed when the hunter raises himself to a shooting position.

Specifically, Ness *et al.* do not teach "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Ness *et al.* teach a cover portion **12** [relied upon as the hunting blind of the claimed invention] operatively connected to a cot portion **11** which is foldable for carrying like one would carry a back pack, as shown in **FIGURE 4** of Ness *et al.* and as discussed at col. 2, lines 42-46 of Ness *et al.* ("A pair of shoulder straps **30** are secured respectively to the frame members **13**, **14** to engage over the shoulders of the wearer so that with the cot portion **11** in the collapsed position as illustrated in FIG. 4 it can be carried on the back...."[Emphasis added]).

U.S. PATENT NUMBER 4,236,657 TO BRUNTON

U.S. Patent Number 4,236,657 to Brunton teaches a back pack with shoulder straps that has a flap along one rear side edge thereof and a pair of leaves that are hingedly connected by a zipper to the flap. The leaves form an envelope which opens out at right angle to the zipper when the leaves are arranged in a packing position, enabling clothes to be received neatly into the envelope whereupon the leaves are wrapped around one another and the pack is in a stowed position and secured. The envelope is detachable from the pack and has a handle to permit use as a release.

Specifically, Brunton does not teach “said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof”[Emphasis added] and “said hunting blind extends from said pack and said first surface of said pack.”[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Brunton teaches in **FIGURE 6** thereof a bag **2** [relied upon as the pack of the claimed invention] and a pair of leaves **18** and **20** [relied upon as the hunting blind of the claimed invention] extending outwardly from sides of a first surface of the bag **2**, respectively. The first surface of the bag **2** of Brunton does not depend from the bag **2** when the first surface of the bag **2** is in its open position, and the pair of leaves **18** and **20** of Brunton do not extend from the bag **2** and the first surface of the bag **2** as required by the advantageous distinctive features of the claimed invention, but rather Brunton teaches the first surface of the bag **2** thereof not having an open position and the pair of leaves **18** and **20** thereof extending only from the bag **2** and not from the first surface of the bag **2**, as discussed at col. 1, lines 43-48 of Brunton (“On the left side **12** of the bag is a flap **14**. A leaf **18**

is attached by a zip to the flap **14**. Referring now to FIG. **6**, the construction is the same with the addition of a right hand leaf **20**, attached to a right hand flap **16**.[Emphasis added]).

U.S. PATENT NUMBER 4,776,503 TO SINK

U.S. Patent Number 4,776,503 to Sink teaches a combination hunting, backpacking, and camping accessory that can be used as a hunter's climbing seat, a blind support, a backpack, or a portable shelf for camp sites which is formed from a pair of interconnected frame components, each having first and second sections, a cross brace attached to the first sections, and a support member releasably secured to the second sections. A cable or other flexible member is fixed at one end to the cross brace, has a series of stops attached to it along its length, and is received in an open notch in the cross brace. When used as a climbing seat, the cable is wrapped around a tree with the first sections extending downwardly, but when used as a backpack, the accessory is reversed and the cable is wrapped around the wearer's waist. When used as a shelf or a blind support, the support member may be removed and replaced with extensions slipped over the second sections.

Specifically, Sink does not teach "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Sink teaches a framework **12** for use with a backpacking device [relied upon as the pack of the claimed invention] as shown in

FIGURE 6 of Sink and as discussed at col. 3, lines 66-67 of Sink (“When it is desired to use the present invention as a backpacking device....”[Emphasis added]) or for use with a hunting blind **66** [relied upon as the hunting blind of the claimed invention] as shown in **FIGURE 9** of Sink and as discussed at col. 4, lines 22-24 of Sink (“When so modified the present invention can also function as a framework for a hunter’s blind as shown in FIG. 9 of the drawings.”[Emphasis added]). There is no interconnection of the backpacking device and the hunting blind **66**. They are for use separately and independently of each other.

U.S. PATENT NUMBER 5,562,236 TO MONZINGO

U.S. Patent Number 5,562,236 to Monzingo teaches a modular backpack which may be reconfigured into luggage or carrying articles. The assembly includes first and second backpacks, each of which may be separated into upper and lower compartments. The lower compartments may then be coupled together to form a transportable piece of luggage and the upper compartments are similarly couplable to form a further piece of luggage. The assembly also includes a tent extendable from the backpack as well as an extensible elastic pack cover for protecting the backpack from rain or the like.

Specifically, Monzingo does not teach “said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof”[Emphasis added] and “said hunting blind extends from said pack and said first surface of said pack.”[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Monzingo teaches modular backpack

pannier luggage **10** [relied upon as the pack of the claimed invention] having a tent assembly **92** [relied upon as the hunting blind of the present invention] removably stowed therein, as shown in **FIGURES 20** and **21** of Monzingo and as discussed at col. 7, lines 15-17 of Monzingo ("Continuing on to FIGS. **20** and **21**, a tent assembly **92** removable stowed within a tent pocket **94** of either of the lower bags **16**, **34** may be provided."[Emphasis added]).

U.S. PATENT NUMBER 5,762,085 TO PUNCH

U.S. Patent Number 5,762,085 to Punch teaches a hunters ground blind including a frame portion. Further provided is a cover system dimensioned for extending over the frame portion. Situated on the cover is a front window with a plurality of vertical strips and a penetrateable screen removably coupled thereover. Also included is a pair of inverted L-shaped slots formed in the cover system which are each adapted to allow the selective opening thereof when hunting various game.

Specifically, Punch does not teach "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Punch teaches a hunters ground blind **10** [relied upon as the hunting blind of the claimed invention] that is foldable for carrying like one would carry a back pack **110**, with small gear and the awning device therefor being stowed between the folds, as shown in **FIGURE 16** of Punch and as discussed at col. 7, lines 44-56 of Punch ("To provide mobility, the foldable frame is adapted to

collapse thereby forming a back pack 110....Also, small gear and the awning device can be carried within the folded area."[Emphasis added]). There is no pack *per se*, just the hunters ground blind 10 being folded for carrying like one would carry a back pack.

U.S. PATENT NUMBER 5,862,967 TO JOHNSON

U.S. Patent Number 5,862,967 to Johnson teaches a frame system that converts to a four-leg support base for use with backpacks. The base eliminates the need to carry a tripod or monopod. Two threaded bosses are used to accommodate attachments such as a shooting rest or to accommodate surveillance or test equipment. The main part of the frame replaces the top hoop found on many external frame backpacks. The frame has two angled members that accept a pair of legs. These legs are made of several parts to permit many configurations. The frame can be removed from the backpack as well. This makes a free standing base that can be used in seated or prone positions and also leaves the pack portion free to be used separately. Nylon sides or hoods can be attached to make the pack assembly act as a blind or a windbreak. Also, an aluminum table can be attached to the frame for cooking, *etc.*, as desired.

Specifically, Johnson does not teach "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Johnson teaches a multi-purpose frame for use with a back pack [relied upon as the pack of the claimed invention] that has

hood or side pieces **40** [relied upon as the hunting blind of the claimed invention] attached by straps **42** to a frame **101**, as shown in **FIGURES 16, 19, and 21** of Johnson and as discussed at col. 4, lines 47-53 and at col. 5, lines 50-52 of Johnson, respectively, ("FIG. **16** shows a hood or side piece **40** that is attached to the backpack as shown in FIG. **19**....Straps **40** are provided as shown to attach the hood **40** to the backpack frame **101**."[Emphasis added] and "The hoods are attached to the backpack using the straps provided as discussed above...."[Emphasis added]). The hoods are attached to the frame of the back pack, not the back pack proper.

U.S. PATENT NUMBER 5,865,355 TO CAMARA

U.S. Patent Number 5,865,355 to Camara teaches a portable barrier apparatus defining a multi-sectioned barrier for protection against wind and sand in various outdoor environments. Additionally, the barrier may be assembled and used as a child or pet restraint enclosure, a privacy barrier, or a temporary personal effect storage site. The apparatus includes a connected plurality of flexible barrier panel members which may be supported in an upright manner with a plurality of pole members. The apparatus further includes a back pack or similar device for transporting the barrier in an undeployed configuration. The back pack can be independently utilized away from the barrier. An accessory enclosure structure is attachable to the barrier.

Specifically, Camara does not teach "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first

surface of said pack.”[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Camara teaches a back pack device **16** [relied upon as the pack of the claimed invention] having a surface [relied upon as the first surface of the pack of the claimed invention] opening sidewardly and a plurality of flexible barrier members **12** [relied upon as the hunting blind of the claimed invention] extending only from the back pack device **16** and not from both the back pack device **16** and the first surface of the back pack device **16**, as shown in **FIGURES 1-3** of Camara.

U.S. PATENT NUMBER 5,927,575 TO GATLING

U.S. Patent Number 5,927,575 to Gatling teaches a cushion and backpack combination including a back support cushion and seat support cushion that are connected by a pair of shoulder straps. Both the back cushion and seat cushion include additional straps for securing the cushions to an object. The back cushion includes integrated pockets and the seat cushion has detachably appended packs on each side. The appended packs are folded over onto the seat cushion and then tied onto the seat cushion using the securing straps to form a single backpack unit. By placing the carrying straps over each shoulder, the sportsman may carry both the cushions and the packs.

Specifically, Gatling does not teach “said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof”[Emphasis added] and “said hunting blind extends from said pack and said first surface of said pack.”[Emphasis added] as required by the advantageous distinctive

features of the claimed invention, but rather Gatling teaches seat and back cushions 6, 4 with detachable side packs 22 and 24 detachably mounted to the seat cushion 6 and which are foldable for carrying like one would carry a back pack, as shown in **FIGURE 3** of Gatling and as discussed at col. 3, lines 7-11 of Gatling ("The strap links 26 provide a convenient means for...allowing the removable packs to be easily folded onto the top of the seat cushion 6 for use as a backpack as shown in FIG. 3."[Emphasis added]). No hunting blind is taught, let alone a combination pack and hunting blind. Absent such a disclosure, one cannot say that Gatling teaches "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention.

U.S. PATENT NUMBER 6,021,794 TO GUERRA

U.S. Patent Number 6,021,794 to Guerra teaches a portable shelter including a frame having a base and a collapsible upper portion. A cover is removably mounted on the upper portion of the frame. A pair of shoulder straps are each coupled to the base of the frame for allowing the same to be worn on a back of a user. A bag is mounted on the base for receiving the cover.

Specifically, Guerra does not teach "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive

features of the claimed invention, but rather Guerra teaches a camouflage canvas **22** [relied upon as the hunting blind of the claimed invention] removably stored in a canvas bag **52** [relied upon as the pack of the claimed invention] for carrying on the back and when removed therefrom the canvas bag **52** forms the bottom of the camouflage canvas **22**, and as such, the camouflage canvas **22** extends upwardly from the canvas bag **52**, as shown in **FIGURES 1 and 2** of Guerra and as discussed at col. 5, lines 36-46 of Guerra ("FIGS. **1 and 2** show a pair of flexible shoulder straps **50**....The straps serve for being received by one of the end caps such that the base of the frame may be worn on a back of a user. Lastly a canvas bag **52** has a face coupled to the base of the frame....During use, the bag serves as a bottom of the canvas. After use, the canvas, stanchions, interconnect rods, and inflatable bed may be stored within the bag such that present invention may be transported on the back of the user."[Emphasis added]).

U.S. PATENT NUMBER 6,510,922 TO HODNETT

U.S. Patent Number 6,510,922 to Hodnett teaches a stand for hunting or photography including a seat structure adapted to be removably positionable on a tree trunk and a cover removably supportable by the seat structure in a manner effective for at least partially concealing a user when seated in the seat structure from front view, side view, back view, or a combination thereof.

Specifically, Hodnett does not teach "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first

surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Hodnett teaches a vertical cover **5** [relied upon as the hunting blind of the claimed invention] operatively connected to a frame that is collapsible for carrying on the back of a user via shoulder straps **20**, as shown in **FIGURE 3** of Hodnett and as discussed at col. 2, lines 32-34 of Hodnett ("...shoulder straps **20** attachable to the bottom of seat frame **4** for carrying the inventive hunting stand **2** in a manner depicted in FIG. 3."[Emphasis added])). Hodnett does not teach a pack, let alone a combination pack and hunting blind. Absent such a disclosure, one cannot say that Hodnett teaches "said first surface of said pack depends from said pack when said first surface of said pack is in said open position thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention.

U.S. PATENT NUMBER 6,698,131 TO LATSCHAW

U.S. Patent Number 6,698,131 to Latschaw teaches a hunting blind that allows the hunter to lie on his back in an inclined position. The hunter's head rests on a head rest. A gun rest is provided laterally across the hunter's body. A pair of flaps cover the hunter and are easily openable when the hunter brings his or her gun into a shooting position and/or moves to a sitting position. The blind is collapsible, requires no assembly in the field, and may be carried on the hunter's back like a backpack.

Specifically, Latschaw does not teach "said first surface of said pack depends from said pack when said first surface of said pack is in said open position

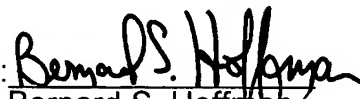
thereof"[Emphasis added] and "said hunting blind extends from said pack and said first surface of said pack."[Emphasis added] as required by the advantageous distinctive features of the claimed invention, but rather Latschaw teaches a blind **10** [relied upon as the hunting blind of the claimed invention] which is collapsible for carrying like one would carry a back pack, as shown in **FIGURE 11** of Latschaw and as discussed at col. 2, lines 47-48 and at col. 6, lines 2-4 of Latschaw, respectively, ("FIG. **11** is the blind of FIG. **1** shown in a collapsed position on a person's back."[Emphasis added] and "The blind **10** can now be carried on the hunter's back by placing the yoke **124** over his or her shoulders."[Emphasis added]).

Applicant/petitioner submits herewith a Memorandum Of Law teaching the proper application of an obviousness holding in support of the instant Petition To Make Special. Pursuant to 37 CFR § 1.17(h), the fee of \$130.00 for the instant Petition To Make Special is enclosed.

In view of the instant Petition To Make Special and the Memorandum of Law submitted in support thereof, applicant/petitioner respectfully requests that the above-identified application be made special and advanced out of turn for examination.

Respectfully,

Dated: 8-22-04

By: 
Bernard S. Hoffmann
Agent of Record
USPTO Reg. 30,756

460 Old Town Road, Suite 7F
Port Jefferson Station, New York 11776
Tel: (631) 331-8883
Fax: (631) 331-8883

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant: Daniel Mignano)

App. No.: 10/764,733)

Invention: BACKPACK HUNTING)
BLIND FOR A TREE)
STAND)

Filed: January 26, 2004)

Group Art Unit: 3727)

Paper No.: 3a)

Examiner: Unassigned)

Mail Stop PETITIONS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

**MEMORANDUM OF LAW SUBMITTED IN SUPPORT
OF APPLICANT/PETITIONER'S PETITION TO
MAKE SPECIAL UNDER 37 CFR § 1.102**

CERTIFICATE OF MAILING UNDER 37 CFR §1.8

I hereby certify that on the below indicated date this correspondence is being deposited with the United States Postal Service as FIRST CLASS MAIL in an envelope with sufficient postage addressed to: Mail Stop PETITIONS; Commissioner for Patents; P.O. Box 1450; Alexandria, VA 22313-1450

Date: 8-28-04

BY: Bernard S. Hoffman
Bernard S. Hoffman



TABLE OF CONTENTS

STATEMENT OF FACTS	1
POINT I	2
DETERMINATION OF OBVIOUSNESS IS MATTER OF LAW	2
POINT II	3
REQUIREMENTS FOR <i>PRIMA FACIE</i> HOLDING OF OBVIOUSNESS INCLUDE SETTING FORTH DIFFERENCES IN CLAIM OVER APPLIED REFERENCES, SETTING FORTH PROPOSED MODIFICATION OF REFERENCE WHICH WOULD BE NECESSARY TO ARRIVE AT CLAIMED SUBJECT MATTER, AND EXPLAINING WHY PROPOSED MODIFICATION WOULD BE OBVIOUS	3
POINT III	4
PRIOR ART MUST PROVIDE MOTIVATING SUGGESTION TO MAKE MODIFICATIONS	4
POINT IV	5
PRIOR ART MUST SUGGEST DESIRABILITY OF MODIFICATION	5
POINT V	6
ELEMENTS CANNOT BE COMBINED IN PIECEMEAL MANNER IN LIGHT OF APPLICANT'S DISCLOSURE TO SHOW OBVIOUSNESS BY USING APPLICANT'S OWN SPECIFICATION AS THOUGH IT WERE PRIOR ART	6
POINT VI	7
FOR HOLDING OF OBVIOUSNESS PRIOR ART MUST ACCOMPLISH APPLICANT'S RESULT	7
POINT VII	8
PATENT APPLICANT MAY ATTACK <i>PRIMA FACIE</i> DETERMINATION AS IMPROPERLY MADE OUT AND TENDING TO SUPPORT CONCLUSION OF NONOBVIOUSNESS	8
CONCLUSION	9
TABLE OF AUTHORITIES	10



STATEMENT OF FACTS

Applicant/petitioner has filed patent application number 10/764,733 on January 26, 2004 for a BACKPACK HUNTING BLIND FOR A TREE STAND. Applicant/petitioner wishes to have the application advanced out of turn for examination by filing a Petition To Make Special, and submits the instant Memorandum Of Law in support thereof.

POINT I

DETERMINATION OF OBVIOUSNESS IS MATTER OF LAW

The Federal Circuit holds that relevant case law must be relied upon in determining obviousness *ipso facto* the determination of obviousness is a matter of law. *In re Deuel*, 51 F.3d 1552, 1557, 34 USPQ.2d (BNA) 1210, 1214 (Fed. Cir. 1995).

POINT II

**REQUIREMENTS FOR *PRIMA FACIE*
HOLDING OF OBVIOUSNESS INCLUDE
SETTING FORTH DIFFERENCES IN
CLAIM OVER APPLIED REFERENCES,
SETTING FORTH PROPOSED
MODIFICATION OF REFERENCE WHICH
WOULD BE NECESSARY TO ARRIVE AT
CLAIMED SUBJECT MATTER, AND
EXPLAINING WHY PROPOSED
MODIFICATION WOULD BE OBVIOUS**

The three steps required for establishing a *prima facie* case of obviousness include setting forth the differences in the claim over the applied references, setting forth the proposed modification of the reference which would be necessary to arrive at the claimed subject matter, and explaining why the proposed modification would be obvious. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467, 15 L.Ed. 2d 545, 86 S. Ct. 684 (1966); and *MPEP* § 706.02.

POINT III

PRIOR ART MUST PROVIDE MOTIVATING SUGGESTION TO MAKE MODIFICATIONS

The Courts require that in order to satisfy the third step for establishing a *prima facie* case of obviousness, it must be identified where the prior art provides a motivating suggestion to make the modifications proposed in the second step for establishing a *prima facie* case of obviousness. *In re Randol and Redford*, 165 USPQ 586, 588; *In re Jones*, 958, F.2d 347, 21 USPQ.2d 1941, 1943-44; and *Gambro Lundia AB v. Baxter Healthcare Corporation*, 110 F.3d 1573, 42 USPQ.2d 1378, 1383 (Fed. Cir. 1997).

POINT IV

PRIOR ART MUST SUGGEST DESIRABILITY OF MODIFICATION

The Courts further require, however, that even if the prior art may be modified the modification is not made obvious unless the prior art suggests the desirability of the modification. *In re Imperato*, 179 USPQ 730, 732; and *In re Fritch*, 922, F.2d 1260, 23 USPQ.2d 1780, 1783-84 (CAFC 1992).

POINT V

**ELEMENTS CANNOT BE COMBINED IN
PIECEMEAL MANNER IN LIGHT OF
APPLICANT'S DISCLOSURE TO SHOW
OBVIOUSNESS BY USING APPLICANT'S
OWN SPECIFICATION AS THOUGH IT
WERE PRIOR ART**

Elements cannot be merely combined in a piecemeal manner in light of applicant's disclosure to show obviousness by using applicant's own specification as though it were prior art without violating the basic mandate inherent in 35 U.S.C. § 103. *In re Stephens, Wenzl, and Browne*, 145 USPQ 656, 657 (CCPA 1965); *Panduit Corp. v. Burndy Corporation et al.*, 180 USPQ 498, 505 (District Court, N.D. Illinois, E. Div.); *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 45 USPQ.2d 1977, 1978, 1981; and *In re Rouffet*, 149 F.3d 1350, 47 USPQ.2d 1453, 1454.

POINT VI

**FOR HOLDING OF OBVIOUSNESS PRIOR
ART MUST ACCOMPLISH APPLICANT'S
RESULT**

For a holding of obviousness prior art must accomplish applicant's result. *In re Wright*, 122 USPQ 522, 524 (1959).

POINT VII

PATENT APPLICANT MAY ATTACK *PRIMA FACIE* DETERMINATION AS IMPROPERLY MADE OUT AND TENDING TO SUPPORT CONCLUSION OF NONOBVIOUSNESS

The patent applicant may attack the *prima facie* determination as improperly made out and tending to support a conclusion of nonobviousness. *In re Fritch*, 922, F.2d 1260, 23 USPQ.2d at 1783 (CAFC 1992).

CONCLUSION

Determination of obviousness is matter of law and includes setting forth differences in claim over applied references, setting forth proposed modification of reference which would be necessary to arrive at claimed subject matter, and explaining why proposed modification would be obvious, without combining elements in piecemeal manner in light of applicant's disclosure by using applicant's own specification as though it were prior art, but by providing motivating suggestion to make modifications and desirability of modification, or else patent applicant may attack *prima facie* determination as improperly made out and tending to support conclusion of nonobviousness.

Respectfully,

8/22/04

By: Bernard S. Hoffman
Bernard S. Hoffman
Agent of Record
USPTO Reg. 30,756

460 Old Town Road, Suite 7F
Port Jefferson Station, New York 11776
Tel: (631) 331-8883
Fax: (631) 331-8883

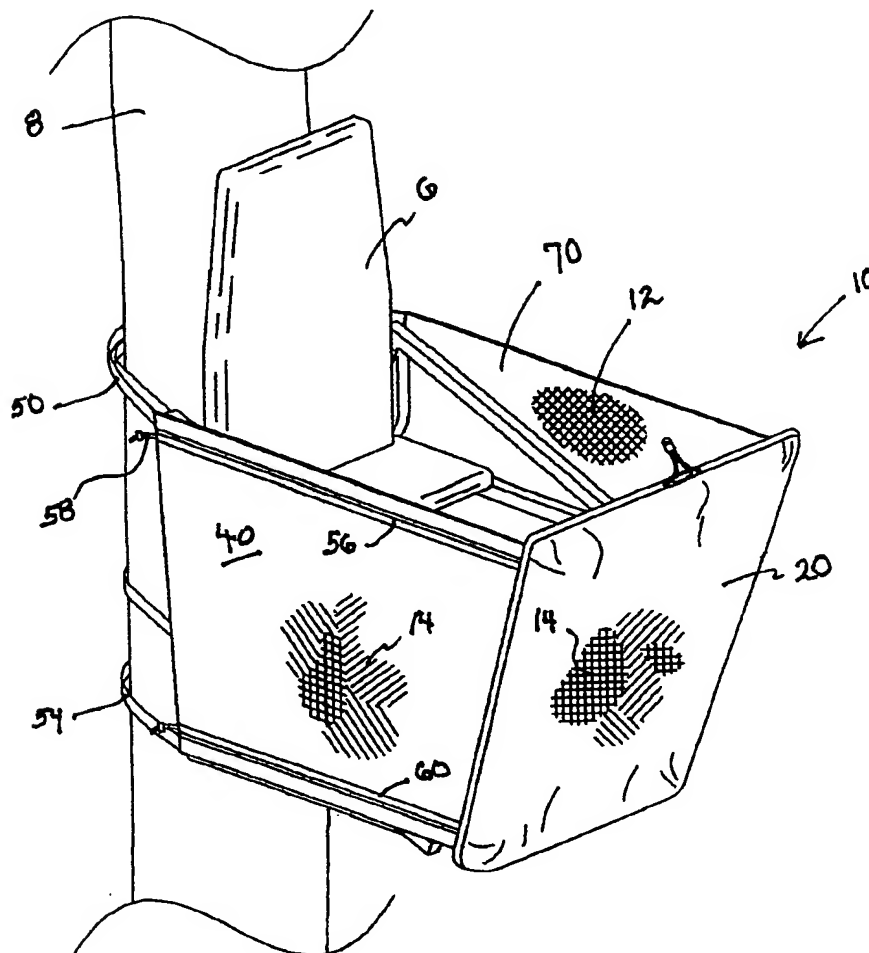
Dated: Port Jefferson Station, NY

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(10) Pub. No.: US 2003/0024559 A1
(43) Pub. Date: Feb. 6, 2003



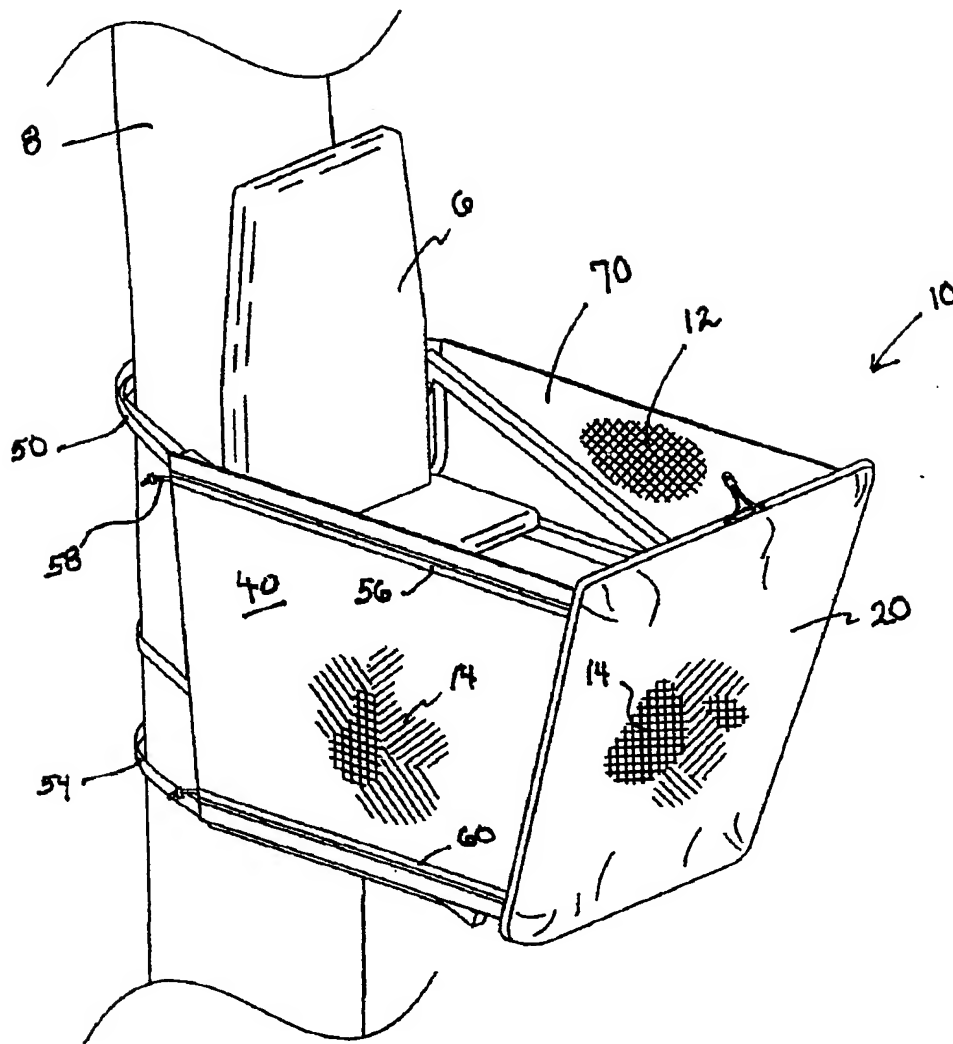


FIG. 1

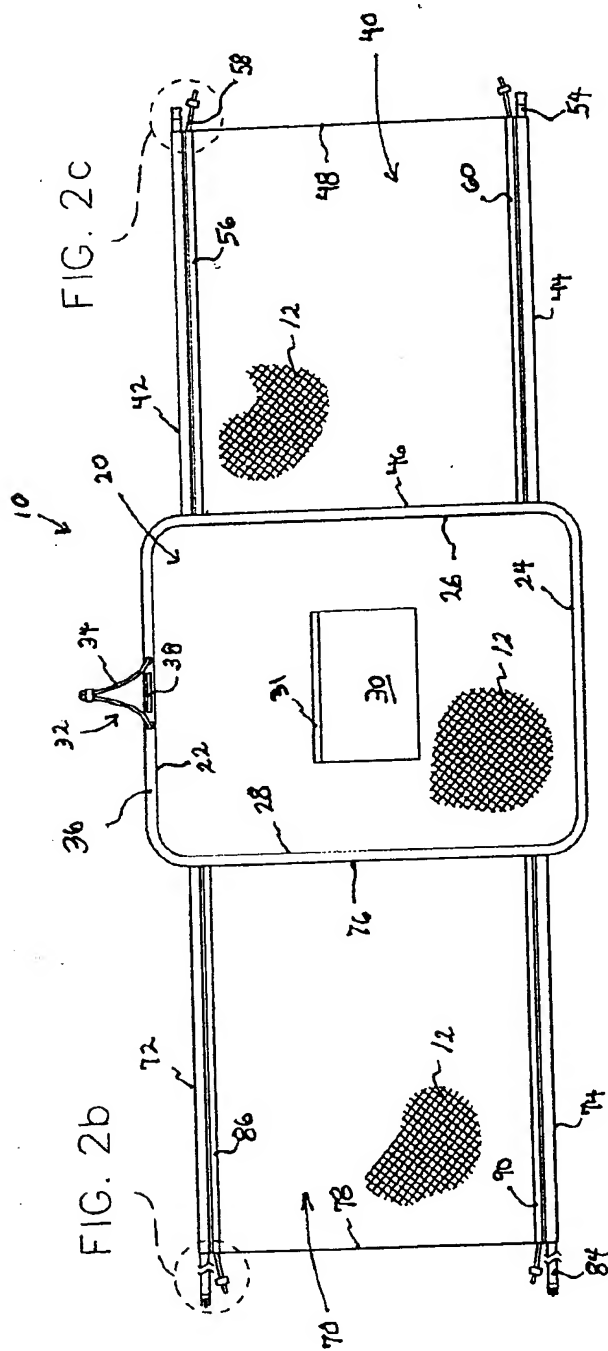


FIG. 2a

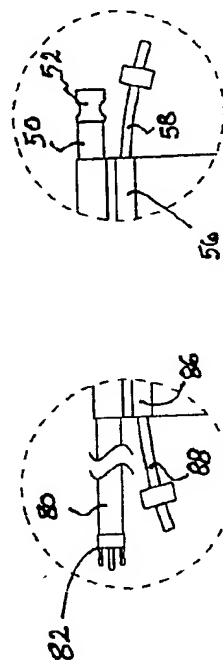


FIG. 2c

FIG. 2b

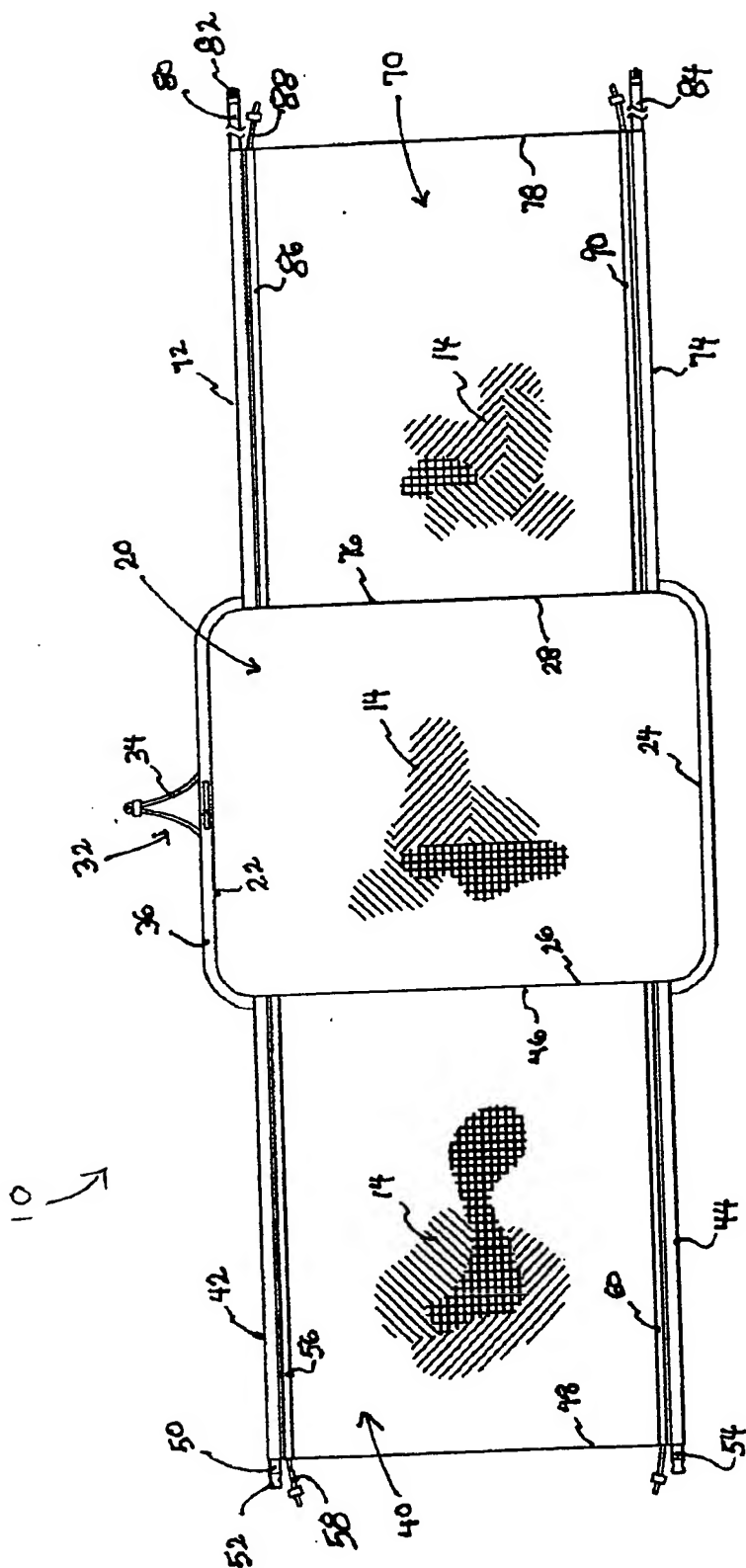


FIG. 3

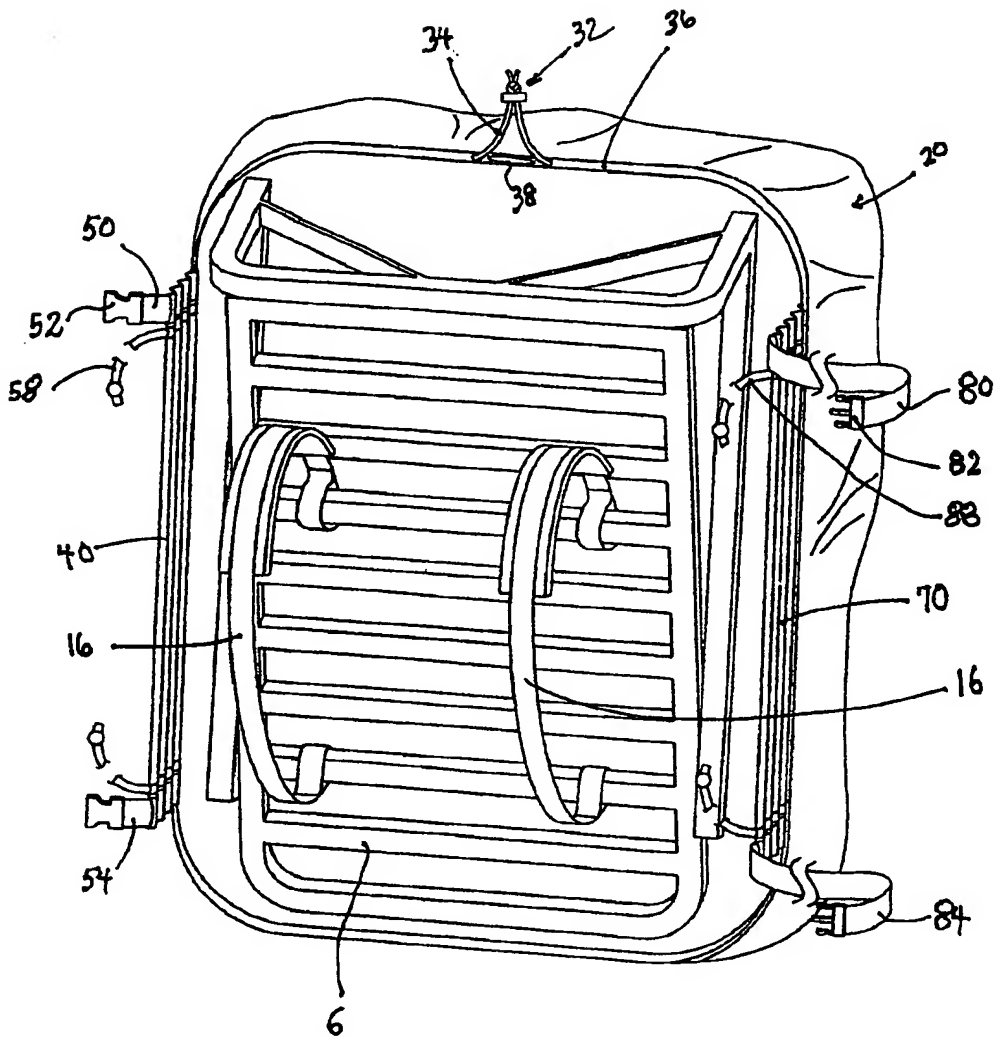


FIG. 4

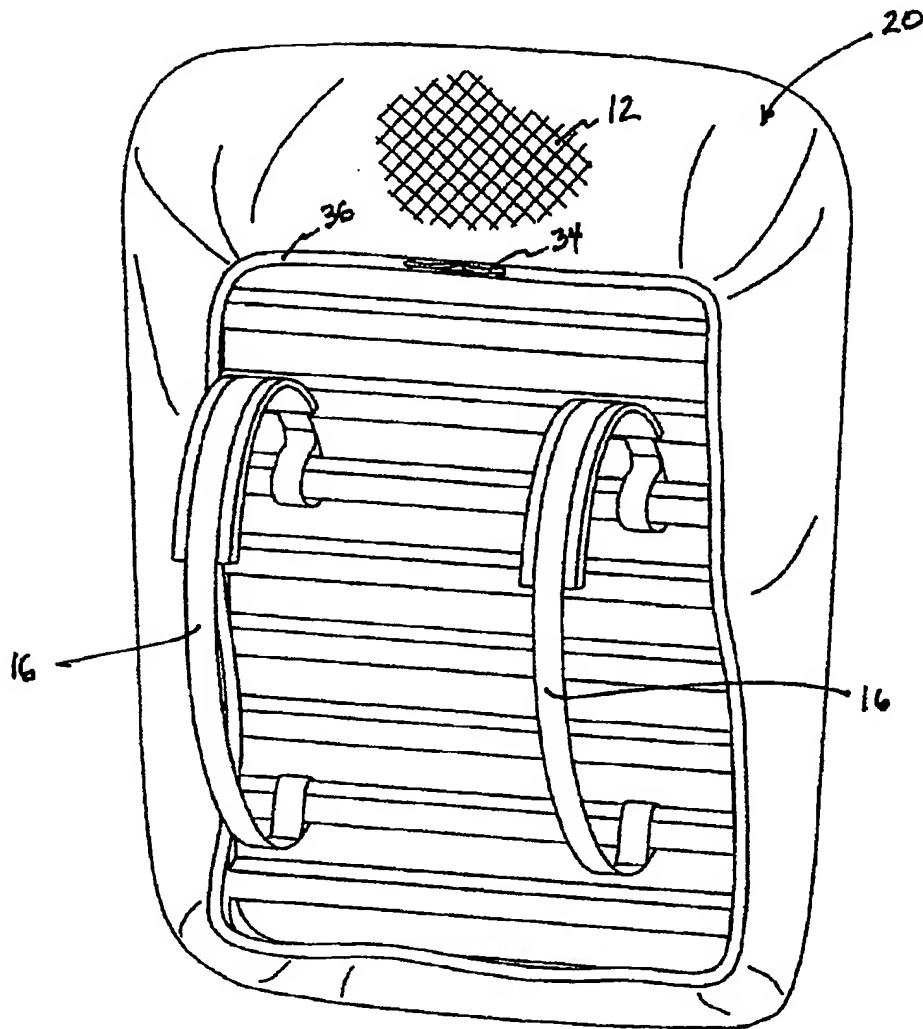


FIG. 5.

REVERSIBLE TREE STAND COVER

BACKGROUND OF THE INVENTION

[0001] This invention relates generally to hunting blinds and, more particularly, to a reversible cover for safely, quietly, and visibly transporting a hunter's tree stand through the woods and for camouflaging the tree stand when mounted to a tree.

[0002] Tree stands are utilized frequently by hunters as well as by nature enthusiasts for watching wildlife from a heightened vantage point. Tree stands are often mounted to a tree trunk or other upstanding support post such as a light pole or the like. However, carrying a tree stand through trees and underbrush to the desired tree is often a noisy event that scares away the wildlife desired to be watched or hunted. Further, most tree stands leave the hunter exposed to the view of the wildlife, which can be a hindrance to a successful hunting experience.

[0003] Various devices have been proposed for shielding a hunter from weather events while standing near a tree or while sitting in a tree stand. Although assumably effective for their intended purposes, the existing devices do not provide a tree stand cover useful for conveniently, safely, and quietly carrying a tree stand to a desired location as well as for camouflaging a tree stand once mounted to a tree.

[0004] Therefore, it is desirable to have a tree stand cover which may be configured for attachment to a tree stand for simultaneous transport of the stand and cover to a desired location. Further, it is desirable to have a cover which may be configured to be extremely visible and which minimizes sound creation during transport through thick underbrush. In addition, it is desirable to have a cover which may be configured to substantially hide a tree stand when mounted to a tree trunk.

SUMMARY OF THE INVENTION

[0005] A reversible tree stand cover according to the present invention includes three sheets of flexible fabric material attached to one another and configured as a center sheet and a pair of side sheets. The side sheets may be extended for use as side wall components that substantially hide a tree stand when properly positioned and attached to a tree trunk or may be collapsed against the center sheet for convenient transport. Drawstring assemblies attached to the side sheets facilitate movement between extended use configurations and transport configurations. Straps with buckles extend from free edges of the side sheets for attaching the tree stand cover to a tree trunk and for tightening the cover around a tree stand mounted to the same tree trunk. When the cover and a tree stand are detached from the tree trunk, a drawstring assembly connected to the center sheet allows the center sheet to be tightened about the tree stand itself for simultaneous transport of both the tree stand and cover. Inner surfaces of the tree stand cover include a blaze orange coloration that is visible during transport while outer surfaces include a camouflage coloration for effectively hiding a tree stand when mounted in a tree. The sheets may also include inner layers of sponge or neoprene material for absorbing impact forces and dampening the sounds thereof caused by contact with underbrush during transport.

[0006] Therefore, a general object of this invention is to provide a tree stand cover that is reversible for selectably displaying a blaze orange or camouflage coloration.

[0007] Another object of this invention is to provide a tree stand cover, as aforesaid, which absorbs the impact of contact with tree branches and the like during transport.

[0008] Still another object of this invention is to provide a tree stand cover, as aforesaid, which may be selectively configured for simultaneous transport with a tree stand or for substantially hiding the tree stand when the tree stand and cover are mounted to a tree.

[0009] Yet another object of this invention is to provide a tree stand cover, as aforesaid, having a pocket with a silent zipper for stowing selected items therein.

[0010] A further object of this invention is to provide a tree stand cover, as aforesaid, having drawstrings for moving side sheets between extended and collapsed configurations.

[0011] Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings, wherein is set forth by way of illustration and example, an embodiment of this invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. 1 is a perspective view of a tree stand cover according to the preferred embodiment of the present invention;

[0013] FIG. 2a is a plan view showing the inner surfaces of the tree stand cover as in FIG. 1;

[0014] FIG. 2b is an isolated view on an enlarged scale of a first strap with a male buckle end as in FIG. 2a;

[0015] FIG. 2c is an isolated view on an enlarged scale of a second strap with a female buckle end as in FIG. 2a;

[0016] FIG. 3 is a plan view showing the outer surfaces of the tree stand cover as in FIG. 1;

[0017] FIG. 4 is a perspective view of the tree stand cover as in FIG. 1 in a transport configuration and partially attached to a tree stand; and

[0018] FIG. 5 is a perspective view of the tree stand cover as in FIG. 4 completely attached to a tree stand for transport.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0019] A reversible tree stand cover 10 according to a preferred embodiment of the present invention will now be described in detail with reference to FIGS. 1 through 5 of the accompanying drawings. The tree stand cover 10 includes a center wall component 20 having top 22 and bottom 24 edges with opposed first 26 and second 28 side edges extending therebetween (FIGS. 2a and 3). The center wall component 20 is constructed of a flexible double-ply canvas material and therefore is also referred to herein as a first fabric sheet.

[0020] The tree stand cover 10 further includes a first side wall component 40 having top 42 and bottom 44 edges with first 46 and second 48 side edges extending therebetween (FIGS. 2a and 3). The first side wall component 40 is preferably constructed of a flexible double-ply canvas material and therefore is also referred to herein as the second fabric sheet. The first side edge 46 of the first side wall

component 40 is fixedly attached to the first side edge 26 of the center wall component 20.

[0021] The tree stand cover 10 further includes a second side wall component 70 having top 72 and bottom 74 edges with first 76 and second 78 side edges extending therebetween (FIGS. 2a and 3). The first side edge 76 of the second side wall component 70 is fixedly attached to the second side edge 28 of the center wall component 20. The second side wall component 70 includes a construction substantially similar to that of the first side wall component 40. As the second side wall component 70 is also preferably constructed of a flexible double-ply canvas material, it is also referred to herein as a third fabric sheet.

[0022] The wall components are sewn together along respective seams such that the side wall components are flexibly movable between selected configurations relative to the center wall component, as to be described in further detail below. Further, the double-ply canvas construction of each wall component enables each sheet to include an inner layer. Preferably, each sheet includes an inner layer of a sponge material for absorbing the impact forces caused by contact the wall components and tree branches or underbrush. The sponge material also serves to dampen sounds caused by such impact forces. Other materials such as neoprene would also be suitable for the inner layer construction.

[0023] Each wall component includes a generally rectangular configuration having planar inner and outer surfaces. Each inner surface includes a blaze orange coloration 12 (FIG. 2a) of the type and color directed by the regulations of most states to be worn by hunters. Each outer surface includes a camouflage pattern coloration 14 (FIG. 3) that substantially hides a tree stand 6 and hunter when properly mounted and positioned on a tree trunk or support post 8 (FIG. 1), as to be further described later.

[0024] A pocket member 30 is fixedly attached to the inner surface of the center wall component 20. The pocket member 30 includes an open upper edge having a zipper 31 or other suitable fastener such that the upper edge may be selectively opened or closed. Preferably, the zipper 31 is constructed of plastic in the form of a so-called "silent-zipper" as is known in the art.

[0025] The tree stand cover 10 may be releasably coupled to a tree trunk 8 or similar upstanding support with straps. One end of a first strap 50 is fixedly attached to the second edge 48 of the first side wall component 40 at a position adjacent the top edge 42 of the first side wall component 40 (FIG. 2c). A female buckle end 52 is connected to the other end of the first strap 50. Another strap 54 having a construction substantially similar to that of the first strap 50 may be connected to the first side wall component 40 adjacent the bottom edge 44 thereof. One end of a second strap 80 is fixedly attached to the second edge 78 of the second side wall component 70 at a position adjacent the top edge 72 thereof (FIG. 2b). A male buckle end 82 is connected to the other end of the second strap 80. Another strap 84 having a construction substantially similar to the second strap 80 may also be attached to the second edge 78 of the second side wall component 70 adjacent the bottom edge 74 thereof. Therefore, the tree stand cover 10 may be positioned so as to surround a tree stand 6 that is already mounted to a tree trunk and then the cover 10 may be securely fastened thereto

by engaging the buckles of the first 50 and second 80 straps (FIG. 1). Of course, the tree stand cover 10 is positioned with the camouflage coloration 14 facing outward so as to substantially hide the tree stand 6.

[0026] The tree stand cover 10 includes a plurality of drawstring assemblies that enable the components to be configured for use or transport and to enable the cover 10 to be connected to a tree stand itself. A first drawstring assembly 56 is attached along the top edge 42 of the first side wall component 40 and includes a first drawstring 58 (FIG. 3). Manipulation of the first drawstring 58 by a user selectively moves the second side edge 48 of the first side wall component 40 between an extended/use configuration displaced from the first side edge 26 of the center wall component 20 and a transport configuration adjacent the first side edge 26 of the center wall component 20. Another drawstring assembly 60 having a construction substantially similar to the first drawstring assembly 56 may be attached along the bottom edge 44 of the first side wall component 40. The first drawstring assembly 56 may be of the type in which one end of the first drawstring 58 is attached to the first side edge 46 of the first side wall component 40 such that a free end of the first drawstring 58 must be pulled toward that first side edge 46 in order to collapse the first side wall component 40. Alternatively, the first drawstring 58 may operate "pulley-style" in which an outward pulling of the free end thereof may collapse the side wall.

[0027] A second drawstring assembly 86 is attached along the top edge 72 of the second side wall component 70 and includes a second drawstring 88 (FIG. 3). The second drawstring assembly 86 includes a construction substantially similar to that of the previously described first drawstring assembly 56. Another drawstring assembly 90 having a construction substantially similar to that of the second drawstring assembly 86 may also be connected along the bottom edge 74 of the second side wall component 70. Therefore, the first 56 and second 86 drawstring assemblies enable a user to extend the side wall components to substantially surround a tree stand or to collapse them for transport purposes.

[0028] The center wall component 20 also includes a drawstring assembly 32. A seam 36 defining a channel extends about the peripheral edges of the center wall component 20 through which a drawstring 34 extends (FIG. 2a). The seam 36 defines an opening 38 through which the drawstring 34 extends and into which excess lengths of the drawstring 34 may be tucked. Pulling on the drawstring 34 causes the peripheral edges of the center wall component 20 to be drawn inwardly toward one another and, therefore, to tighten around any object placed against the center wall component 20. As particularly shown in FIG. 4, the peripheral edges of the center fabric sheet 20 tighten around a tree stand 6 when the drawstring 34 is pulled. With the side wall components moved to their collapsed/transport configurations, the center wall component 20 may be completely tightened and releasably coupled to the tree stand 6 for simultaneous transport (FIG. 5). Excess length of the drawstring 34 may be tucked into the seam channel through the opening 38. If not already provided with a selected tree stand 6, shoulder straps 16 may be provided with the tree stand cover 10. These shoulder straps 16 may be attached to the tree stand 6 such that the cover 10 and tree stand 6 may be simultaneously carried by a user in the manner of a backpack.

[0029] In use, the tree stand cover 10 is carried, with or without a tree stand 6, to a location where it is desired to be used. When transporting the cover 10, the fabric side wall components 40, 70 are moved to their collapsed configurations using the first 56 and second 86 drawstring assemblies. If a tree stand 6 is to be simultaneously transported, then the center wall component drawstring 34 is extended such that the peripheral edges of the center wall component 20 tighten about the tree stand 6. It is important that the inner surface of the center wall component 20 be exposed such that the blaze orange coloration 12 makes the user's presence and location visible to other hunters. The inner layers of the wall components are effective to dampen the effects of contact with tree branches or underbrush. Once the desired location is reached, the steps described above may be reversed to detach the cover 10 from the tree stand 6. Once the tree stand 6 is mounted to a tree trunk 8 or the like, the cover 10 may be positioned so as to substantially surround the tree stand 6, making certain that the camouflage colored outer surfaces are outwardly positioned. The buckles 52, 82 of the straps 50, 80 may be engaged to secure the cover 10 to the tree trunk 8.

[0030] It is understood that while certain forms of this invention have been illustrated and described, it is not limited thereto except insofar as such limitations are included in the following claims and allowable functional equivalents thereof.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is as follows:

1. A tree stand cover for use with a hunting tree stand of the type that is adapted for releasable attachment to an upstanding support, said tree stand cover comprising:

a center wall component having a top edge and a bottom edge with first and second side edges extending therebetween;

a first side wall component having a top edge and a bottom edge with first and second side edges extending therebetween, said first side edge of said first side wall component being fixedly attached to said first side edge of said center wall component;

a second side wall component having a top edge and a bottom edge with first and second side edges extending therebetween, said first side edge of said second side wall component being fixedly attached to said second side edge of said center wall component; and

means for releasably connecting said first and second side wall components to an upstanding support to which a hunting tree stand is already attached such that said center wall component and said first and second side wall components surround said tree stand.

2. The tree stand cover as in claim 1 wherein said connecting means comprises:

a first strap having one end connected to said first side wall component and an opposed end;

a first buckle member connected to said opposed end of said first strap;

a second strap having one end connected to said second side wall component and an opposed end; and

a second buckle member connected to said opposed end of said second strap for releasably securing said second strap to said first strap.

3. The tree stand cover as in claim 1 wherein:

said first and second side wall components are constructed of a flexible canvas material; said tree stand cover further comprising:

a first drawstring assembly connected to said first side wall component and adapted to selectively collapse said first side wall component against said first side edge of said center wall component; and

a second drawstring assembly connected to said second side wall component and adapted to selectively collapse said second side wall component against said second side edge of said center wall component.

4. The tree stand cover as in claim 3 wherein said first and second side wall components include a respective inner layer of neoprene material.

5. The tree stand cover as in claim 3 further comprising a third drawstring assembly having a drawstring extending through a seam along said top, bottom, first and second side edges of said center wall component, said drawstring adapted to selectively tighten said edges about said tree stand in a transport configuration upon a pulling of said drawstring.

6. The tree stand cover as in claim 5 further comprising a pair of shoulder straps adapted to be attached to said tree stand for transporting said tree stand and said center, first, and second side wall components upon the shoulders of a user in said transport configuration.

7. The tree stand cover as in claim 1 wherein said center wall component is constructed of a double-ply canvas material.

8. The tree stand cover as in claim 7 wherein said center wall component includes an inner layer of neoprene material.

9. The tree stand cover as in claim 1 wherein said center wall component, said first side wall component, and said second side wall component each include respective inner and outer planar surfaces, each inner planar surface having a blaze orange coloration and each outer planar surface having a camouflage coloration.

10. The tree stand cover as in claim 1 further comprising a pocket member fixedly attached to an inner planar surface of said center wall component, said pocket having one edge adapted to be selectively opened for receiving selected items into said pocket member.

11. A tree stand cover for hiding and transporting a tree stand of the type that is releasably attachable to a tree trunk, said tree stand cover comprising:

a first fabric sheet having a top edge and a bottom edge with first and second side edges extending therebetween, said first fabric sheet including an inner surface having a blaze orange coloration and an outer surface having a camouflage coloration;

a second fabric sheet having a top edge and a bottom edge with first and second side edges extending therebetween, said first side edge of said second fabric sheet being fixedly attached to said first side edge of said first fabric sheet, said second fabric sheet including an inner surface having a blaze orange coloration and an outer surface having a camouflage coloration;

a third fabric sheet having a top edge and a bottom edge with first and second side edges extending therebetween, said first side edge of said third fabric sheet being fixedly attached to said second side edge of said first fabric sheet, said third fabric sheet including an inner surface having a blaze orange coloration and an outer surface having a camouflage coloration; and

means for connecting first, second, and third fabric sheets to a tree trunk for hiding a front end and sides of a tree stand, respectively, when said tree stand is attached to said tree trunk.

12. The tree stand cover as in claim 11 wherein said connecting means comprises:

a first strap having one end connected to said second fabric sheet and an opposed end;

a first buckle member connected to said opposed end of said first strap;

a second strap having one end connected to said third fabric sheet and an opposed end; and

a second buckle member connected to said opposed end of said second strap for releasably securing said second strap to said first strap, whereby said straps may be extended about said tree trunk and said first and second buckles selectively engaged.

13. The tree stand cover as in claim 11 wherein said first, second, and third fabric sheets are constructed of a flexible canvas material.

14. The tree stand cover as in claim 13 further comprising means for moving said second and third fabric sheets between an extended configuration and a transport configuration, said moving means comprising:

a first drawstring assembly coupled to said second fabric sheet and having a first drawstring extending along said top edge thereof, an operation of said first drawstring adapted to move said second side edge of said second fabric sheet between an extended configuration displaced from said first side edge of said first fabric sheet and a transport configuration in which said second side edge of said second fabric sheet is adjacent said first side edge of said first fabric sheet; and

a second drawstring assembly coupled to said third fabric sheet and having a second drawstring extending along said top edge thereof, an operation of said second drawstring adapted to move said second side edge of said third fabric sheet between an extended configuration displaced from said second side edge of said first fabric sheet and a transport configuration in which said second side edge of said third fabric sheet is adjacent said second side edge of said first fabric sheet.

15. The tree stand cover as in claim 14 further comprising a third drawstring assembly attached to said first fabric sheet, said third drawstring assembly including a third drawstring extending through a seam along said top, bottom, first, and second side edges of said first fabric sheet, said third drawstring adapted to tighten said top, bottom, first and second side edges of said first fabric sheet around said tree stand upon a pulling of said third drawstring by a user, whereby said tree stand and said first, second, and third fabric sheets may be simultaneously transported.

16. The tree stand cover as in claim 15 further comprising a pair of shoulder straps adapted to be attached to said tree stand for simultaneously transporting said tree stand and said first, second, and third fabric sheets when said second and third fabric sheets are in said transport configuration and said first fabric sheet is tightened around said tree stand.

17. The tree stand cover as in claim 11 wherein said first fabric sheet is constructed of a double-ply canvas material having an inner layer of sponge material whereby to absorb impact forces.

18. The tree stand cover as in claim 11 wherein said first fabric sheet is constructed of a double-ply canvas material having an inner layer of neoprene material whereby to absorb sounds caused by impact forces.

19. The tree stand cover as in claim 11 further comprising a pocket member fixedly attached to said inner surface of said first fabric sheet, said pocket having one edge adapted to be selectively opened for receiving selected items into said pocket member.

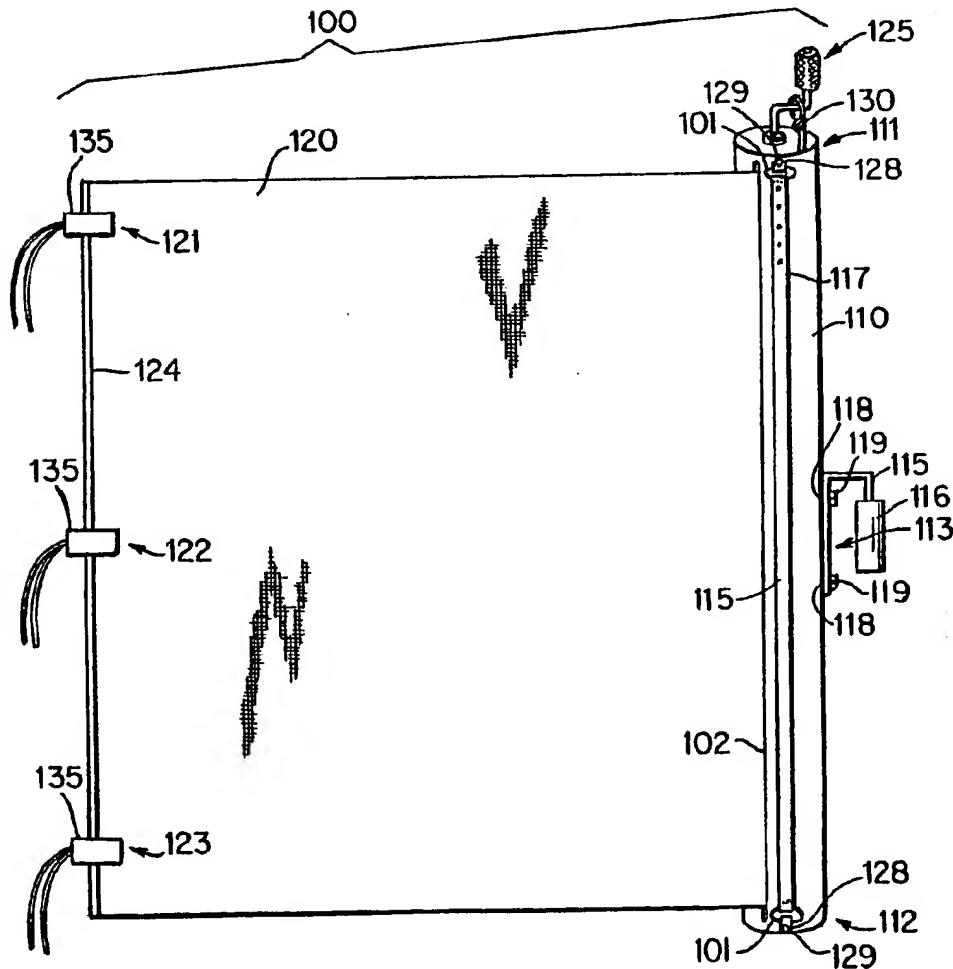
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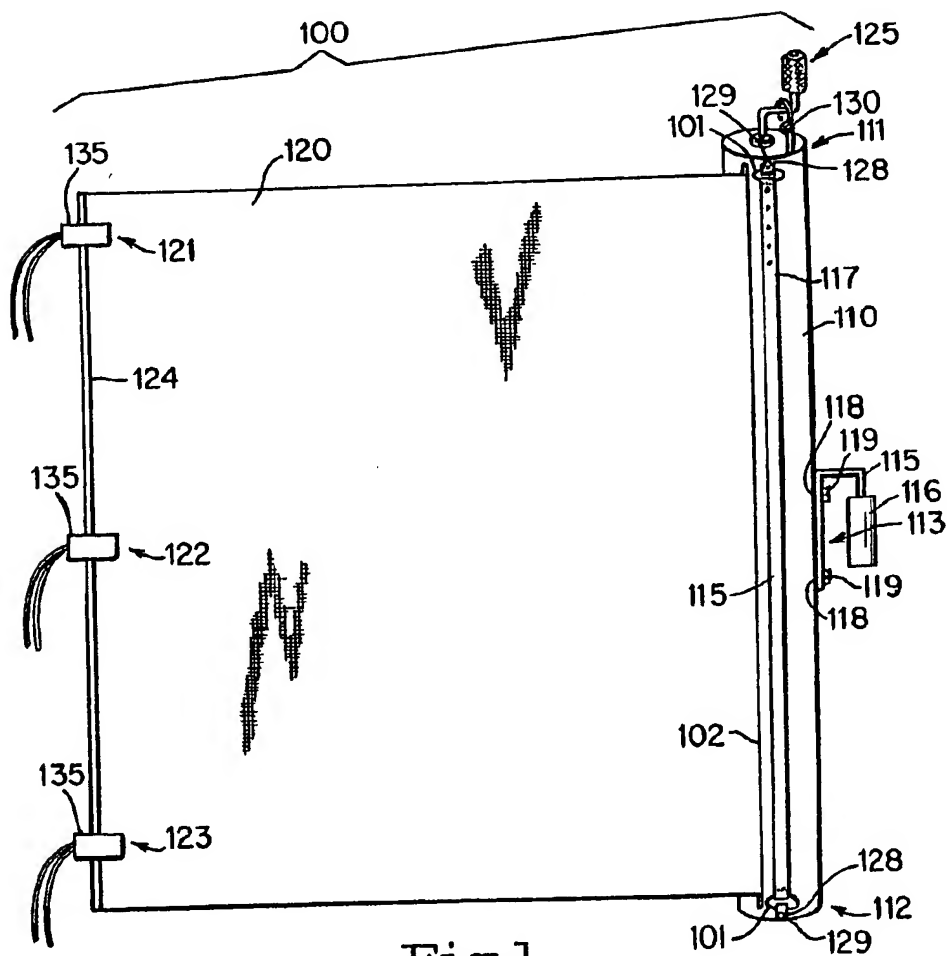
(19) **United States**(12) **Patent Application Publication**
Hill(10) Pub. No.: **US 2003/0116183 A1**
(43) Pub. Date: **Jun. 26, 2003**(54) **PORTABLE SCREEN ASSEMBLY**

(57)

ABSTRACT(76) Inventor: **Michael Hill, Berkeley Springs, WV (US)**Correspondence Address:
PATTON BOGGS LLP
2550 M Street, N.W.,
Washington, DC 20037 (US)(21) Appl. No.: **10/023,731**(22) Filed: **Dec. 21, 2001****Publication Classification**(51) Int. Cl.⁷ **E04H 15/02; E04H 15/18;**
..... **E04H 15/00**(52) U.S. Cl. **135/901; 135/96; 135/97**

A screen housing assembly includes a housing structure, a carrying structure, a screening structure, a screen releasing assembly, and a releasable securement structure. The housing structure can be carried and moved by a user. The carrying structure is secured to the housing structure for carrying the housing structure. The screening structure is stored internally of the housing structure. The screen releasing assembly is attached to the screening structure to allow the user to release a portion of the screening structure from internally of the housing structure to externally of the housing structure. The releasable securement structure is coupled to the screen releasing assembly to change the screen releasing assembly between a screen released position and a screen releasably secured position. The portion of the screening structure, which is external of the housing structure, can be used to screen off an area.





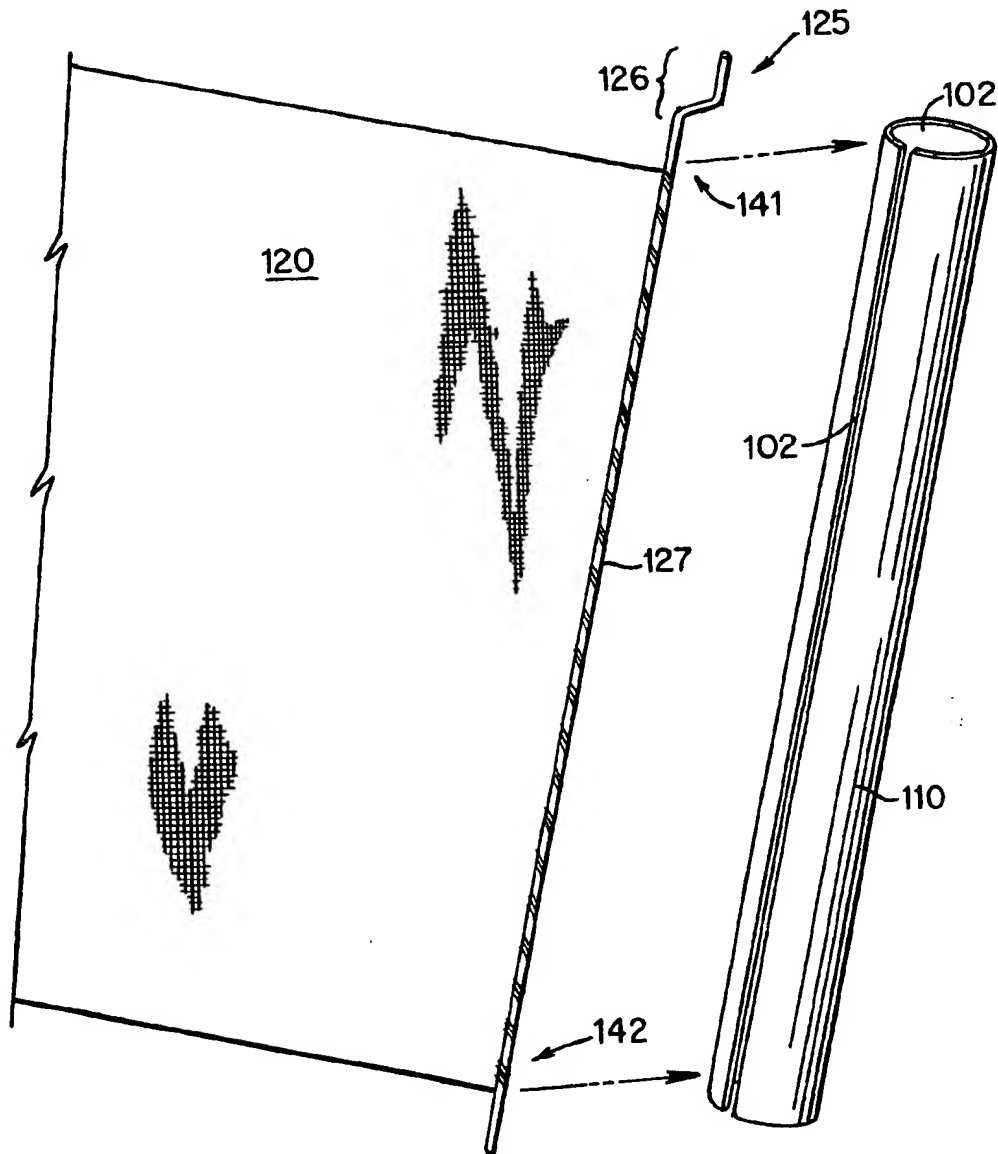


Fig.2

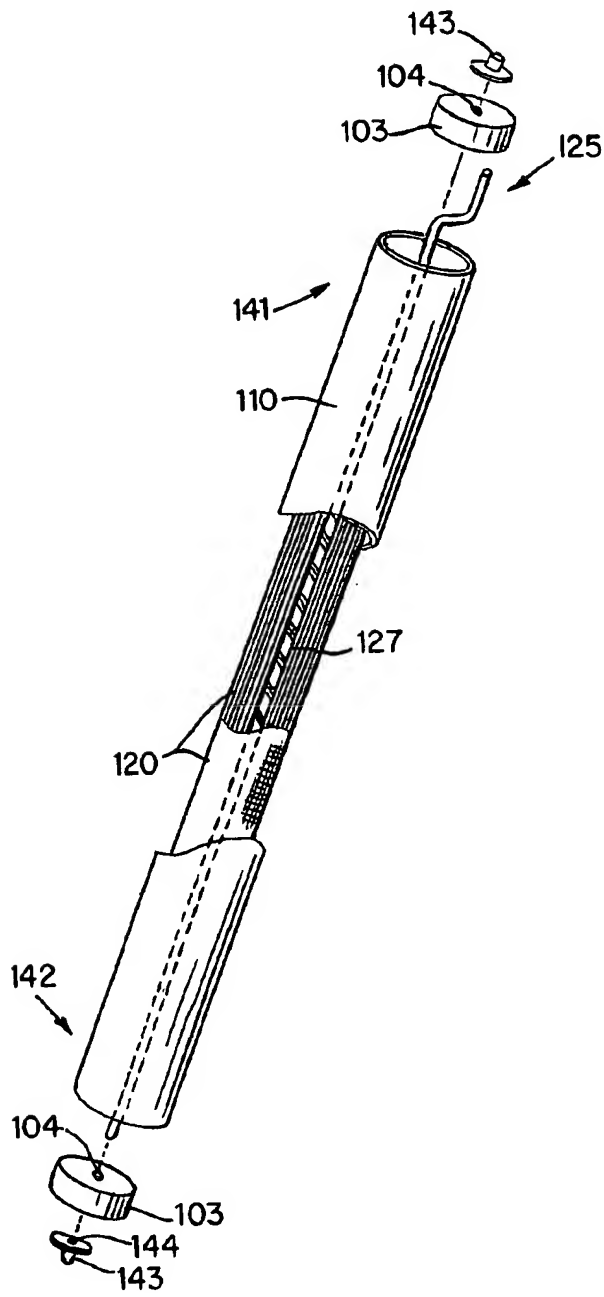


Fig.3

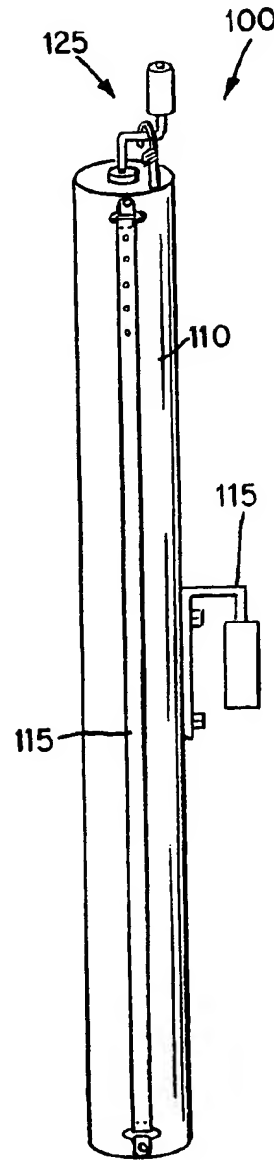


Fig.4

Fig.5

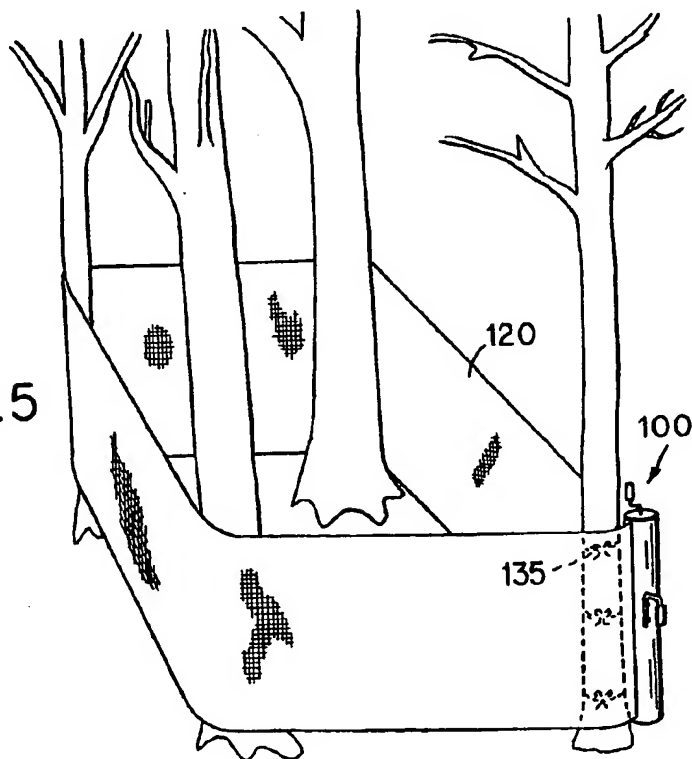
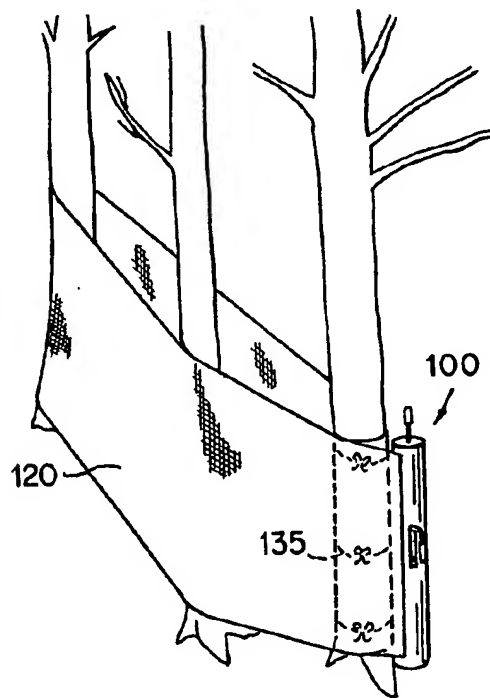


Fig.6



PORTABLE SCREEN ASSEMBLY

FIELD OF THE INVENTION

[0001] The present invention relates in general to screen assemblies. In particular, the present invention relates to portable screen assemblies that can be used to screen off an area, for example, to facilitate hunting.

BACKGROUND OF THE INVENTION

[0002] It is known to use hunting blinds that are collapsible and that are capable of being carried and moved. These hunting blinds, however, are bulky to carry, and/or clumsy to install, and once installed, they are difficult to disassemble and to be moved. Examples of hunting blinds are found in U.S. Pat. Nos. 5,609,176 to Weeks, 5,010,909 to Cleveland, 4,473,087 to Cavender, and 3,442,275 to Ternes.

SUMMARY

[0003] One embodiment of the present invention provides a screen housing assembly. The screen housing assembly includes a housing structure, a carrying structure, a screening structure, a screen releasing assembly, and a releasable securement structure. The housing structure is capable of being carried and moved by a user. The carrying structure is releasably and fixedly secured to the housing structure for carrying the housing structure. The screening structure is stored internally of the housing structure. The screen releasing assembly is fixedly attached to the screening structure to allow the user to release a portion of the screening structure from internally of the housing structure to externally of the housing structure. The releasable securement structure is coupled to the screen releasing assembly to change the screen releasing assembly between a screen released position and a screen releasably secured position. The screen releasing assembly and the releasable securement structure are accessible externally of the housing structure. The portion of the screening structure, which is external of the housing structure, can be used to screen off an area.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] In the drawings, like reference numerals represent similar parts of the illustrated embodiments of the present invention throughout the several views and wherein:

[0005] FIG. 1 is a perspective view of an embodiment of a screen assembly, where a portion of a screening structure is released from internally of a housing structure to externally of the housing structure;

[0006] FIG. 2 is a perspective view of a screen releasing assembly and a housing structure in accordance with an embodiment of the present invention, where the screen releasing assembly is moved toward the housing structure for installation;

[0007] FIG. 3 is a cross-sectional view of a housing structure in accordance with an embodiment of the present invention, where a set of screen releasing assembly fasteners is moved toward the housing structure for installation;

[0008] FIG. 4 is a perspective view of an embodiment of a screen assembly, where a screening structure is stored internally of a housing structure;

[0009] FIG. 5 is similar to FIG. 1, but illustrates the screen assembly being used to screen off a leveled area; and

[0010] FIG. 6 is similar to FIG. 1, but illustrates the screen assembly being used to screen off a sloped area.

DETAILED DESCRIPTION

[0011] FIG. 1 illustrates an embodiment of a screen housing assembly 100. The screen housing assembly 100 may include a housing structure 110, a carrying structure 115, a screening structure 120, a screen releasing assembly 125, and a releasable securement structure 130.

[0012] The housing structure 110 is constructed and arranged to be carried and moved by a user using the carrying structure 115. The housing structure 110 (e.g., PVC housing structure) may be cylindrical in shape and/or made of a soft covered material. The size, shape and/or material of the housing structure 110 may be varied, for example, according to the preference of the user. The housing structure 110 may include (i) a forward end portion 111, (ii) a rearward end portion 112, and (iii) a center portion 113.

[0013] The carrying structure 115 is releasably and fixedly secured to the housing structure 110 for carrying and moving the housing structure 110. The carrying structure 115 may include at least one of a handle 116 and a shoulder strap 117.

[0014] The housing structure 110 has a set of fastener receiving openings 118 formed therethrough. To mount the handle 116 to the housing structure 110, the handle 116 is placed against the surface of the center portion 113 of the housing structure 110 with the set of fastener receiving openings 118 in alignment, and a set of fasteners 119 (e.g., threaded bolts) are inserted through the openings. Then, a set of complimentary threaded structures (e.g., threaded nuts) are threaded onto the ends of the set of fasteners 119 inside the housing structure 110 to secure the handle 116 against the exterior of the housing structure 110. Alternatively, the handle 116 may be externally molded or welded integrally with the housing structure 110. Also, the handle 116 may include a wooden handle.

[0015] A shoulder strap assembly may include the shoulder strap 117 and a set of shoulder strap securement structures 101. The shoulder strap 117 may be adjusted, for example, based on a preference of the user. The housing structure 110 has a set of fastener receiving openings 128 formed therethrough. To mount the set of shoulder strap securement structures 101 to the housing structure 110, the set of shoulder strap securement structures 101 is placed against the surface of the forward end portion 111 and the rearward end portion 112 of the housing structure 110 with the set of fastener receiving openings 128 in alignment, and a set of fasteners 129 (e.g., threaded bolts) are inserted through the openings. Then, a set of complimentary threaded structures (e.g., threaded nuts) are threaded onto the ends of the set of fasteners 129 inside the housing structure 110 to secure the shoulder strap securement structure 101 against the exterior of the housing structure 110. Alternatively, the shoulder strap securement structure 101 may be externally molded or welded integrally with the housing structure 110. The shoulder strap 117 may then be coupled to the set of shoulder strap securement structures 101 to be releasably and fixedly secured to the housing structure 110.

[0016] The screen releasing assembly 125 and the releasable securement structure 130 are accessible externally of

the housing structure 110. Moreover, the screen releasing assembly 125 may be accessible externally from at least one of the forward end portion 111 and the rearward end portion 112 of the housing structure 110. The screen releasing assembly 125 is fixedly attached to the screening structure 120 (see FIG. 2) to allow the user to release a portion of the screening structure 120 from internally of the housing structure 110 to externally of the housing structure 110. The releasable securement structure 130, such as, for example, a cord and hook, is coupled to the screen releasing assembly 125 to change the screen releasing assembly 125 between a screen released position and a screen releasably secured position. The portion of the screening structure 110, being external of the housing structure 110, can be used to screen off an area (see FIGS. 5-6), such as, for example, for facilitating hunting. The area screened off may include at least one of a level area (see FIG. 5) and a sloped area such as, for example, a hillside area (see FIG. 6). Also, the area screened off may be of sufficient size to allow the user to move and remain unnoticeable.

[0017] The screening structure 120 may include (i) a forward end portion 121, (ii) a center portion 122, and (iii) a rearward end portion 123. A fastener assembly 135 may then be fixedly attached to at least one of (i) the forward end portion 121, (ii) the center portion 122, and (iii) the rearward end portion 123 of the screening structure 120. The fastener assembly 135 is fixedly attached to the screening structure 120 to releasably secure the screening structure 120 to an object, such as, for example, a tree, bushes and/or a fence. The fastener assembly 135, for example, may be made of raw hide and/or nylon. Also, the screening structure 120 may include a shaft 124 (e.g., steel rod) that may be used, for example, in place of a tree (or equivalent) to screen off the area. If a tree (or equivalent) is unavailable to screen off the area, then, for example, a fence (or equivalent) may be used instead, where the shaft 124 can provide support for the screen housing assembly 100 to be used to screen off the area. The screening structure 120 may be constructed and arranged to blend in with the surroundings of the area screened off. For example, the screening structure 120 may be made of a camouflaged material.

[0018] FIG. 2 is a perspective view of the screen releasing assembly 125 and the housing structure 110 in accordance with an embodiment of the present invention. The screening structure 120 is fixedly attached (e.g., tightly sewn) to the screen releasing assembly 125, which may include a crank 126, which can be rotated by hand, and/or a crank shaft 127, which is coupled to the crank 126. A wooden handle may be used for turning the crank 126. The screen releasing assembly 125 may include a forward end portion 141 and a rearward end portion 142.

[0019] The housing structure 110 may include a receiving opening 102 formed therethrough to mount the screen releasing assembly 125 to the housing structure 110. FIG. 2 illustrates the screen releasing assembly 125 being moved toward the housing structure 110 to be inserted through the receiving opening 102 and to be mounted to the housing structure 110.

[0020] FIG. 3 is a cross-sectional view of the housing structure 110 in accordance with an embodiment of the present invention, and illustrates the screening structure 120 stored internally of the housing structure 110. A set of

positioning supports 103, having positioning receiving openings 104, is moved toward the housing structure 110 for installation. To mount the set of positioning supports 103 to the housing structure 110, the set of positioning receiving openings 104 is aligned with and moved toward the forward end portion 141 and the rearward end portion 142, respectively, of the screen releasing assembly 125, for example, to affix the set of positioning supports 103 to a set of complimentary structures (not shown) inside the housing structure 110.

[0021] A set of positioning fasteners 143, having fastener receiving openings 144, is moved toward the set of positioning supports 103 for installation. To couple the set of positioning fasteners 143 to the set of positioning supports 103, the set of positioning receiving fasteners 143 is aligned with and moved toward the forward end portion 141 and the rearward end portion 142, respectively, of the screen releasing assembly 125, for example, to be coupled (e.g., threaded) onto a set of complimentary structures (not shown) of the screen releasing assembly 125. The set of positioning supports 103 and the set of positioning fasteners 143 may be constructed and arranged for rotatably securing the screen releasing assembly 125 to the housing structure 110.

[0022] FIG. 4 is a perspective view of an embodiment of a screen assembly, where a screening structure is stored internally of a housing structure. The housing structure 100 may be constructed and arranged to protect and/or preserve the screening structure 120 (not shown). The housing structure 110 may retain a scent to be applied to the screening structure 120 by the screening structure 120 being stored internally (e.g., entirely internally) of the housing structure 110. The scent may be applied to the screening structure 120, for example, to cover the scent emanating from the user (e.g., body odor). The scent may be neutral or of a type appealing to the observed and/or hunted. The housing structure 110 may also be sealed (e.g., air tight) to extend the duration of the scent to be applied to the screening structure 120.

[0023] Another embodiment of a screen assembly may include a screening structure 120, a fastener assembly 135, a screen releasing assembly 125, a releasable securement structure 130, and a carrying assembly 115 (such as, for example, illustrated in FIGS. 1-2). The screening structure 120 may be used for screening off an area. The fastener assembly 135 may be attached to the screening structure 120 to releasably secure the screening structure 120 to an object for screening off the area. The screen releasing assembly 125 may be fixedly attached to the screening structure 120 to releasably store the screening structure 120. The screen releasing assembly 125 may include a crank, which can be rotated by hand, and/or a crank shaft, which may be coupled to the crank. The releasable securement structure 130 is coupled to the screen releasing assembly 125 to change the screen releasing assembly 125 between a screen released position and a screen releasably secured position. The carrying assembly 115 may be coupled to the screen releasing assembly 125 for carrying and moving the screening structure 120, which can be used to facilitate hunting.

[0024] An embodiment of a method for screening off an area is provided, for example, by using a screen assembly (such as, for example, illustrated in FIGS. 1-4) that is

capable of being carried and moved by a user. The method may provide for carrying and moving a housing structure 110 by using a carrying structure 115, which is releasably and fixedly secured to the housing structure 110. Also, the method may provide for storing a screening structure 120 entirely internally of the housing structure 110 to carry and move the screening structure 120. The method may be performed by a right-handed or a left-handed user, for example, with ease.

[0025] The method releases a portion of the screening structure 120 from internally of the housing structure 110 to externally of the housing structure 110 by using a screen releasing assembly 125. The screen releasing assembly 125 may be fixedly attached to the screening structure 120.

[0026] The method positions a releasable securement structure 130 in a screen releasably secured position from a screen released position. The releasable securement structure 130 may be coupled to the screen releasing assembly 125. The screen releasably secured position allows the user to releasably secure the position of the screen releasing assembly 125, whereas the screen released position allows the user to release the position of the screen releasing assembly 125. The housing structure 110, moreover, may be constructed and arranged to be made of a soft covered material such that the user can grip and squeeze the housing structure 110 to, in effect, releasably secure the position of the screen releasing assembly.

[0027] The method fastens a fastener assembly 135 to an object to screen off an area. The fastener assembly 135 may be attached to the screening structure 120. The fastener assembly 135 fastened to the object may be adjusted and/or readjusted by the user to screen off a level area (see FIG. 5) and/or a sloped area (see FIG. 6). The fastener assembly 135 may include a plurality of fasteners, all of which may be independently adjusted and/or readjusted.

[0028] The method then screens off the area by using the portion of the screening structure 120 released external of the housing structure 110, and that is releasably secured in position, for example, by the releasable securement structure 130. The method may adjust any slack from the portion of the screening structure 120, used in screening off the area, for example, by using the releasable securement structure 130. Also, the method may adjust the height of the portion of the screening structure 120, used in screening off the area, with respect to the ground by bending at least a part of the portion of the screening structure 120 over upon itself. The screening structure 120 may be constructed and arranged to be 36 inches in height, with respect to the ground.

[0029] The method, also, may release the fastener assembly 135 from the object to allow the screen assembly 100, for example, to be moved to screen off another area. As discussed above, the fastener assembly 135 may include (i) a forward end portion 121, (ii) a center portion 122, and (iii) a rearward end portion 123 of fasteners (see FIG. 1). The method, thus, may initially release the forward end portion 121 and the rearward end portion 123 of the fastener assembly 135, and not release the center portion 122 of the fastener assembly 135 fastened to the object, for example, to reduce the amount of contact of the screening structure 120 with the ground (having dirt, leaves and/or tree branches thereon).

[0030] The method may then position the releasable securement structure 130 in the screen released position

from the screen releasably secured position. As such, the method may store the portion of the screening structure 120 from externally of the housing structure 110 to internally of the housing structure 110 by using the screen releasing assembly 125. The carrying structure 115 such as, for example, the shoulder strap 117 may be adjusted and used to facilitate carrying and moving the housing structure 110 to store the screening structure 120. The method may, at last, release the fastener attached to the center portion 122 of the screening structure 120.

[0031] The method may then position the releasable securement structure 130 in the screen releasably secured position from the screen released position. Finally, the method may fasten the fastener assembly 135 to the housing structure 110. The screen assembly may then be carried and moved to screen off another area.

[0032] Thus, the described embodiments of a screen assembly are collapsible, durable, and capable of being carried and moved. These embodiments, moreover, provide for a screen assembly that is easy and/or convenient (e.g., efficient and light weight) to carry, and/or to install, and once installed, it is quickly disassembled and moved.

[0033] The foregoing presentation of the described embodiments is provided to enable any person skilled in the art to make or use the present invention. Various modifications to these embodiments are possible, and the generic principles presented herein may be applied to other embodiments as well. As such, the present invention is not intended to be limited to the embodiments shown above, and/or any particular configuration of structure but rather is to be accorded the widest scope consistent with the principles and novel features disclosed in any fashion herein.

What is claimed is:

1. A screen housing assembly comprising:

- a housing structure constructed and arranged to be capable of being carried and moved by a user;
 - a carrying structure constructed and arranged to be releasably and fixedly secured to the housing structure for carrying the housing structure;
 - a screening structure constructed and arranged to be stored internally of the housing structure;
 - a screen releasing assembly fixedly attached to the screening structure to allow the user to release a portion of the screening structure from internally of the housing structure to externally of the housing structure; and
 - a releasable securement structure coupled to the screen releasing assembly to change the screen releasing assembly between a screen released position and a screen releasably secured position,
- wherein the screen releasing assembly and the releasable securement structure are accessible externally of the housing structure, and
- wherein the portion of the screening structure, being external of the housing structure, can be used to screen off an area.

2. The screen housing assembly of claim 1, wherein the screening structure is constructed and arranged to be used to facilitate hunting.

Jun. 26, 2003

3. The screen housing assembly of claim 1, further comprising

a fastener assembly fixedly attached to the screening structure to releasably secure the screening structure to an object.

4. The screen housing assembly of claim 3,

wherein the screening structure includes (i) a center portion, (ii) a forward end portion, and (iii) a rearward end portion, and

wherein the fastener assembly is fixedly attached to at least one of (i) the center portion, (ii) the forward end portion, and (iii) the rearward end portion of the screening structure.

5. The screen housing assembly of claim 1, wherein the screen releasing assembly includes a crank, which can be rotated by hand.

6. The screen housing assembly of claim 5, wherein the screen releasing assembly includes a crank shaft, which is constructed and arranged to be coupled to the crank.

7. The screen housing assembly of claim 1,

wherein the housing structure includes a forward end portion and a rearward end portion, and

wherein the screen releasing assembly is accessible from at least one of the forward end portion and the rearward end portion of the housing structure.

8. The screen housing assembly of claim 1, wherein the carrying structure includes at least one of a handle and a shoulder strap.

9. The screen housing assembly of claim 1, wherein the housing structure is configured cylindrical in shape.

10. The screen housing assembly of claim 1, wherein the housing structure is soft covered.

11. The screen housing assembly of claim 1, wherein the screening structure is constructed and arranged to be stored entirely internally of the housing structure.

12. The screen housing assembly of claim 11,

wherein the screening structure is constructed and arranged to be applied with a scent, and

wherein the housing structure is constructed and arranged to retain the scent applied to the screening structure when the screening structure is stored internally of the housing structure.

13. The screen housing assembly of claim 1, wherein the area screened includes a level area.

14. The screen housing assembly of claim 1, wherein the area screened includes a sloped area.

15. A screen assembly comprising:

a screening structure constructed and arranged to be used for screening off an area;

a fastener assembly attached to the screening structure to releasably secure the screening structure to an object for screening off the area;

a screen releasing assembly fixedly attached to the screening structure to releasably store the screening structure;

a releasable securement structure coupled to the screen releasing assembly to change the screen releasing assembly between a screen released position and a screen releasably secured position; and

a carrying assembly coupled to the screen releasing assembly for carrying and moving the screening structure.

16. The screen assembly of claim 15, wherein the screening structure is constructed and arranged to be used to facilitate hunting.

17. The screen assembly of claim 15,

wherein the screening structure includes (i) a center portion, (ii) a forward end portion, and (iii) a rearward end portion, and

wherein the fastener assembly is attached to at least one of (i) the center portion, (ii) the forward end portion, and (iii) the rearward end portion of the screening structure.

18. The screen assembly of claim 15, wherein the screen releasing assembly includes a crank, which can be rotated by hand.

19. The screen assembly of claim 18, wherein the screen releasing assembly includes a crank shaft, which is constructed and arranged to be coupled to the crank.

20. The screen assembly of claim 15, wherein the carrying assembly includes at least one of a handle and a shoulder strap.

21. A method for screening off an area comprising:

releasing a portion of a screening structure from internally of a housing structure to externally of the housing structure by using a screen releasing assembly, the screen releasing assembly being constructed and arranged to be fixedly attached to the screening structure;

positioning a releasable securement structure in a screen releasably secured position from a screen released position, the releasable securement structure being constructed and arranged to be coupled to the screen releasing assembly;

fastening a fastener assembly to an object to screen off an area, the fastener assembly being constructed and arranged to be attached to the screening structure; and

screening off the area by using the portion of the screening structure released external of the housing structure,

wherein the housing structure is constructed and arranged to be capable of being carried and moved by a user.

22. The method of claim 21, further comprising

carrying and moving the housing structure by using a carrying structure, the carrying structure being constructed and arranged to be releasably and fixedly secured to the housing structure.

23. The method of claim 22, wherein the carrying structure includes at least one of a handle and a shoulder strap.

24. The method of claim 21, wherein the screening structure is constructed and arranged to blend in with the surroundings of the area screened off, which can be used to facilitate hunting by allowing the user to move therein and remain unnoticeable to the surroundings thereof.

25. The method of claim 21, wherein the fastener assembly is further constructed and arranged to releasably secure the screening structure to the housing structure.

26. The method of claim 21,

wherein the screening structure includes (i) a center portion, (ii) a forward end portion, and (iii) a rearward end portion, and

wherein the fastener assembly is fixedly attached to at least one of (i) the center portion, (ii) the forward end portion, and (iii) the rearward end portion of the screening structure.

27. The method of claim 21, wherein the screen releasing assembly includes a crank, which can be rotated by hand.

28. The method of claim 27, wherein the screen releasing assembly includes a crank shaft, which is constructed and arranged to be coupled to the crank.

29. The method of claim 21,

wherein the housing structure includes a forward end portion and a rearward end portion, and

wherein the screen releasing assembly is accessible from at least one of the forward end portion and the rearward end portion of the housing structure.

30. The method of claim 21, further comprising storing the screening structure entirely internally of the housing structure to carry and move the screening structure.

31. The method of claim 30,

wherein the screening structure is constructed and arranged to be applied with a scent, and

wherein the housing structure is constructed and arranged to retain the scent applied to the screening structure when the screening structure is stored internally of the housing structure.

32. The method of claim 21, wherein the area screened off includes a level area.

33. The method of claim 21, wherein the area screened off includes a sloped area.

34. The method of claim 21, further comprising

adjusting the height of the portion of the screening structure, used in screening off the area, with respect to the ground by bending the portion of the screening structure over upon itself.

* * * * *

[54] **PORTABLE DUCK BLIND CAMP COT AND BACK PACK**

[76] Inventors: **Phillip J. Ness**, 5948 Mendocino Blvd., Sacramento, Calif. 95824;
Barney S. Kawada, 5930 24th St. 58, Sacramento, Calif. 95822

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[21] Appl. No.: **437,641**

[52] U.S. Cl. **135/1 R; 135/3 R; 135/15 CF; 135/DIG. 1; 135/DIG. 6; 224/9; 5/114**

[51] Int. Cl.² **A45F 1/00**

[58] Field of Search **224/8 R, 25 A, 9, 10; 5/113, 114, 157, 184; 135/3 R, 4 R, 15 CF, 5.2, DIG. 1, DIG. 6, 1 A, 1 R; 296/105; 43/1; 285/302, 303**

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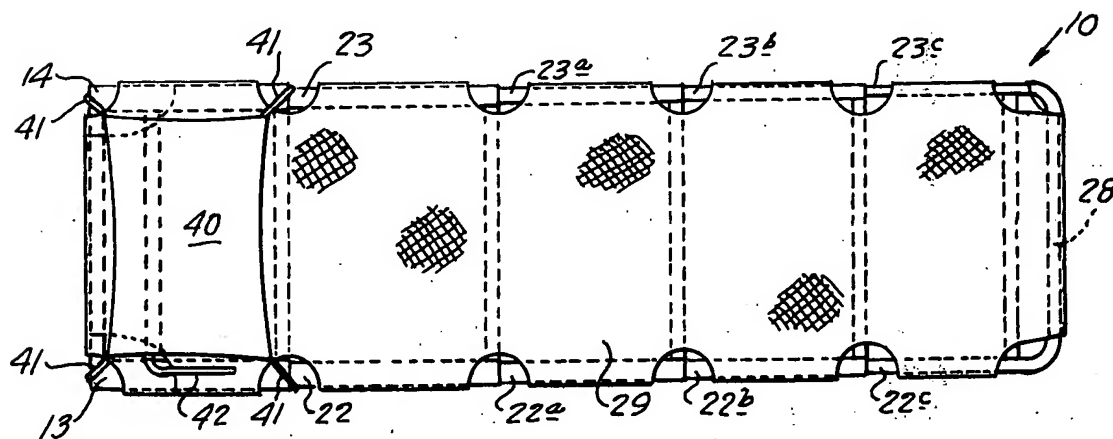
Primary Examiner—Robert J. Spar
Assistant Examiner—Lawrence J. Oresky
Attorney, Agent, or Firm—Blair & Brown

[57]

ABSTRACT

A portable duck blind camp cot and back pack consists of a plurality of telescoping frame sections each having support legs to support the cot or duck blind from the ground. With the frame sections telescoped together a pair of shoulder straps on an end section permit the device to be used as a back pack. A folding cover also formed of telescopic sections is adapted to overlay the cot to form a duck blind to completely hide the hunter and yet be quickly and easily removed when the hunter raises himself to a shooting position.

1 Claim, 10 Drawing Figures



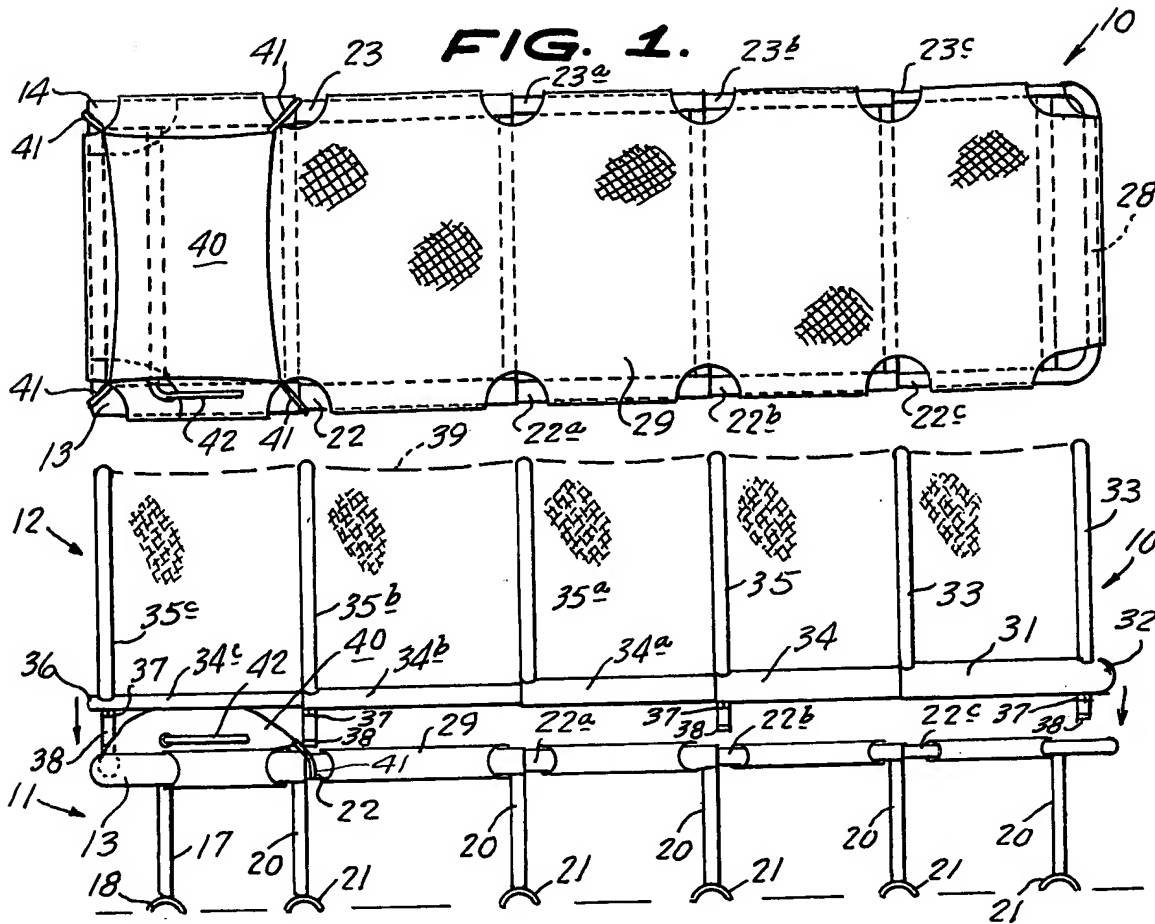


FIG. 2.

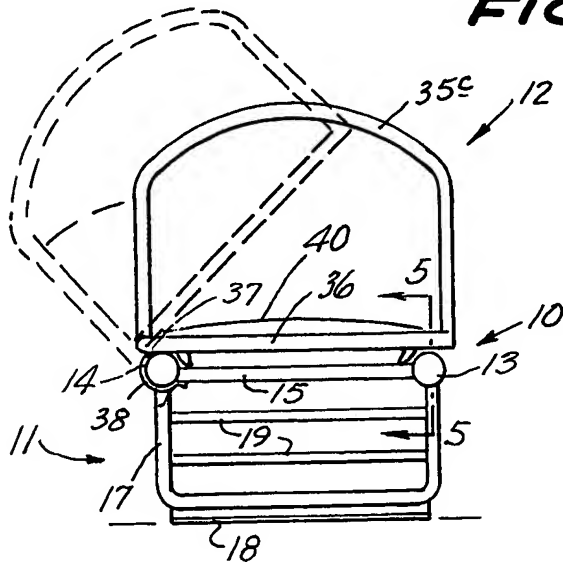


FIG. 3.

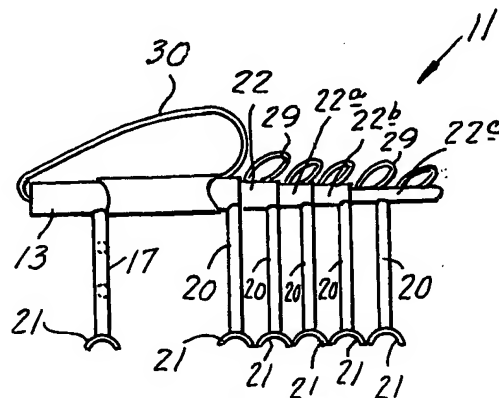
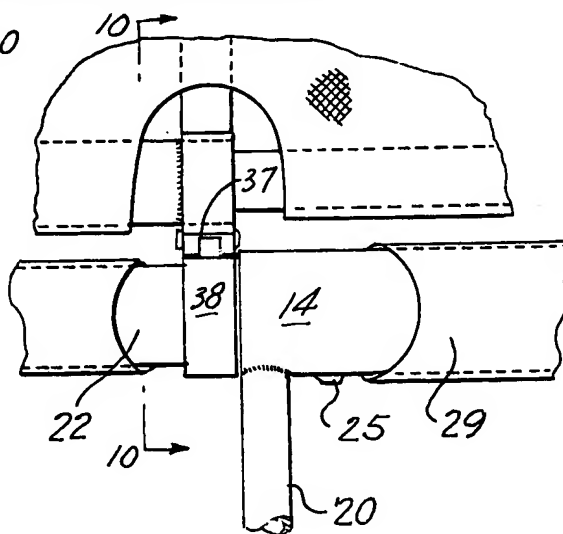
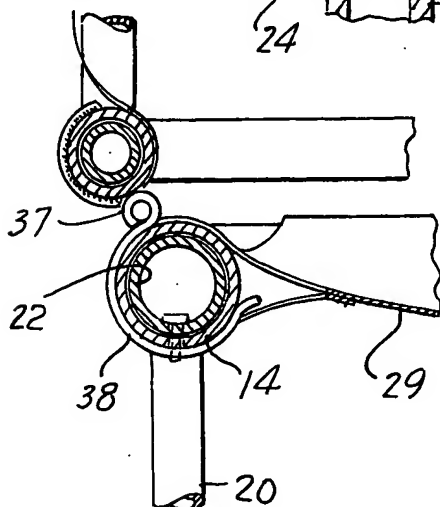
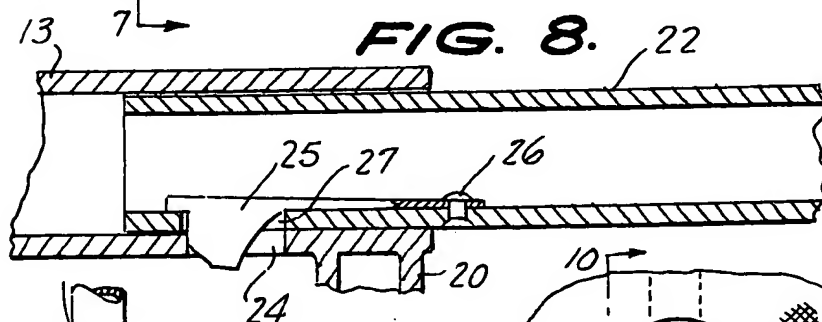
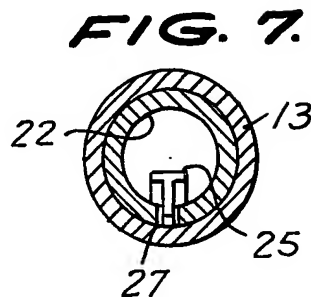
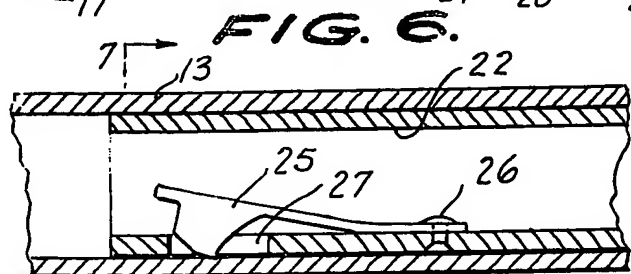
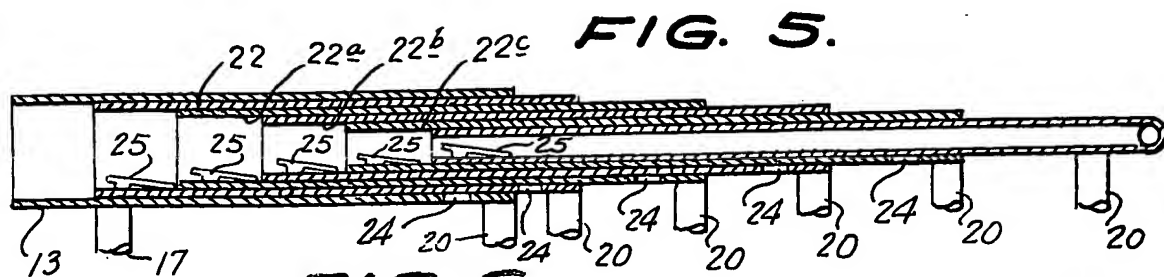


FIG. 4.



PORTABLE DUCK BLIND CAMP COT AND BACK PACK

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

The present invention relates to field apparatus which forms a portable duck blind, a camp cot and a back pack.

SUMMARY OF THE INVENTION

The instant invention included a plurality of frame sections which are telescoped together each having legs to support the frame section from the ground. When fully extended the frame sections support a canvas to serve as a bed or a support for the hunter using the device as a duck blind. In collapsed position the frame can be supported from the shoulders of a back pack by the use of a pair of shoulder straps. A telescoping camouflage cover is provided for the device for use as a duck blind and can be quickly and easily swung out of position when the hunter desires to raise to shooting position.

The primary object of the invention is to provide a combined duck blind camp cot and back pack which is inexpensive to manufacture, simple to use and effective in its use.

Other objects and advantages will become apparent in the following specification when considered in light of the attached drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top plan view of the invention;

FIG. 2 is a side elevation of the invention;

FIG. 3 is an end elevation of the invention;

FIG. 4 is a side elevation of the device collapsing to a back pack relation;

FIG. 5 is an enlarged fragmentary vertical sectional view, taken on the line 5—5 of FIG. 3, looking in the direction of the arrows with the sections partially telescoped together;

FIG. 6 is an enlarged fragmentary view similar to FIG. 5;

FIG. 7 is a transverse cross-section taken on the line 7—7 of FIG. 6, looking in the direction of the arrows;

FIG. 8 is a view similar to FIG. 6 with the latch in latching position;

FIG. 9 is a fragmentary plan view of the connection between the cot and the cover; and

FIG. 10 is a fragmentary transverse sectional view, taken on the line 10—10 of FIG. 9, looking in the direction of the arrows.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail, wherein like reference characters indicate like parts throughout the several figures, the reference numeral 10 indicates generally, a portable duck blind camp cot and back pack device constructed in accordance with the invention.

The device 10 includes a cot portion indicated generally at 11 and a cover portion indicated generally at 12. The cot portion 11 has a pair of tubular side members 13, 14 connected by a pair of spaced parallel generally horizontal tubular members 15, 16. A U-shaped leg 17 is connected to the frame members 13, 14 and depends

perpendicularly therefrom. An inverted concaved foot member 18 is secured to the leg member 17 across the lower portion thereof to prevent the leg 17 from penetrating the ground. A pair of spaced parallel tubular rods 19 extend across the U-shaped leg 17 parallel to the tubular member 15. The rods 19 form a bottom support for the device when used as a back pack.

A second generally U-shaped leg 20 is secured to the frame members 13, 14 in spaced parallel relation to the leg 17 as can be clearly seen in FIG. 2. An inverted concaved foot 21 is secured to the lower portion of the leg 20 in horizontal alignment with the foot 18.

A pair of spaced parallel tubular frame members 22, 23 are telescopically mounted in the frame members 13, 14 respectively and are connected together at their outer ends by a U-shaped leg member 20 having an inverted concaved foot member 21 on its lower end.

The frame members 13, 14 each have a latch slot 24 formed on the lower portion thereof adjacent the U-shaped leg 20. A spring latch 25 is secured within the frame member 22 by a rivet 26 and projects through a slot 27 in the frame member 22 in order to engage in the slot 24 of the frame member 13 as can be seen in FIGS. 6 and 8. A plurality of successively smaller tubular frame members 22a, 22b and 22c are telescopically positioned within each of the next larger frame members and are provided with latches 25 engaging in keeper slots 24 to maintain the cot portion 11 in extended position as it is opened. The smallest frame member 22c is not only connected to the frame member 23c by means of a leg 20 but has an integral cross member 28 extending therebetween. The frame member 22b is connected to the frame member 23b by means of a leg 20 and the frame member 22a is connected to the frame member 23a by a leg member 20 all as can be clearly seen in FIG. 1 and 2. A canvas support platform 29 encompasses the side frames and end frames of the cot portion 11 and is stretched tautly therebetween with the cot in its extended position to serve as a support for the user when in a reclining position.

A pair of shoulder straps 30 are secured respectively to the frame members 13, 14 to engage over the shoulders of the wearer so that with the cot portion 11 in the collapsed position as illustrated in FIG. 4 it can be carried on the back with additional equipment supported on the leg 17 and rods 19 to be carried by a hiker.

The cover portion 12 consists of a pair of spaced parallel tubular frame members 31 integrally connected into a horizontal U-shaped member by a transverse portion 32. A pair of inverted U-shaped cover supports 33 are secured to the frame members 31 in spaced parallel relation. A pair of spaced parallel frame members 34 are telescopically received in the frame members 31 and are connected by an inverted U-shaped cover support 35. A pair of spaced parallel frame members 34a are telescopically received in the frame members 34 and are connected by a U-shaped cover support 35a. A pair of spaced parallel frame members 34b are telescopically received in the frame members 34a and are connected by an inverted U-shaped cover support 35b. A pair of spaced parallel frame members 34c are telescopically received in the frame members 34b and are connected by an inverted U-shaped cover support 35c and by a transverse cross member 36. A plurality of hinge members 37 are connected to the frame members 31, 34 34b and 34c with

3

each having a spring snap clamp 38 inwardly formed thereon in depending relation thereto to encompass an adjacent frame member 14, 23, 23b and 23c in order to secure the cover member 12 to the cot 11 so that the cover member 12 can be quickly thrown off as desired by the user.

A cover 39 is supported on the cover supports 33, 35, 35a, 35b and 35c to form an enclosure within which the user lies while sleeping or waiting for ducks. An inflatable pillow 40 is supported on the frame members 13, 14 and the canvas 29 being secured thereto by straps 41. The pillow 40 has a relatively long inflating tube 42 extending outwardly therefrom to permit the pillow 40 to be inflated by the user after enclosing himself within the cover portion 12 while on the cot 11.

In the use and operation of the invention the cot portion 11 is extended and latched from its back pack condition as illustrated in FIG. 4 to the extended condition as illustrated in FIG. 2. The cover portion 12 is then extended and the spring clamps 38 are snapped onto the frame members 13, 23, 23b and 23c of the cot portion 11. The hunter when using the device as a duck blind then raises the cover portion 12 and reclines on the cot portion 11 lowering the cover portion 12 so that he is hidden completely from the duck. He then inflates the pillow 40 to whatever pressure is suitable to him and rest quietly while waiting for the ducks. When ducks are heard and he is ready to shot he flips the cover portion 12 open quickly on its hinges 37 and

4

raises to a firing position along side of the cot portion 11.

When using the cot portion 11 for sleeping purposes the cover portion 12 may be discarded or it may serve as a tent to protect the user if this be desired.

Having thus described the preferred embodiment of the invention it should be understood that numerous structural modifications and adaptations may be resorted to without departing from the spirit of the invention.

What is claimed is:

1. A combined duck blind, cot and back pack comprising a plurality of relatively rigid frame sections having telescoping side frame members, a plurality of generally U-shaped legs integrally connecting each of said frame sections and extending generally parallel to each other, a canvas support secured to said frame sections for supporting an occupant, spring urged latch and recess means on said frame sections for locking said frame sections in extended position, a fabric cover member to cover the entire cot detachably secured to said device with said cover member being hinged parallel to the longitudinal axis of the cot at regular spaced intervals along the entire length of the device to permit the cover to be moved into and out of covering position with respect to said device, a plurality of telescopically collapsible related frame sections forming said cover member, and a plurality of clamping members attached to said cover, each clamping member adapted to releasably attach to a plurality of cot frame members.

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[54] **BACKPACK**

[76] Inventor: **Ronald G. Brunton**, Flat 15, 71 Ryde Rd., Hunters Hill, Australia, 2110

[21] Appl. No.: **16,602**

[22] Filed: **Feb. 21, 1979**

[30] **Foreign Application Priority Data**

Feb. 28, 1979 [AU] Australia PD3545

[51] Int. Cl.³ **A45F 3/04; A45F 4/02**

[52] U.S. Cl. **224/153; 190/52; 224/209; 224/237**

[58] Field of Search **224/153, 202, 209-216, 224/235, 237, 259; 190/43, 52**

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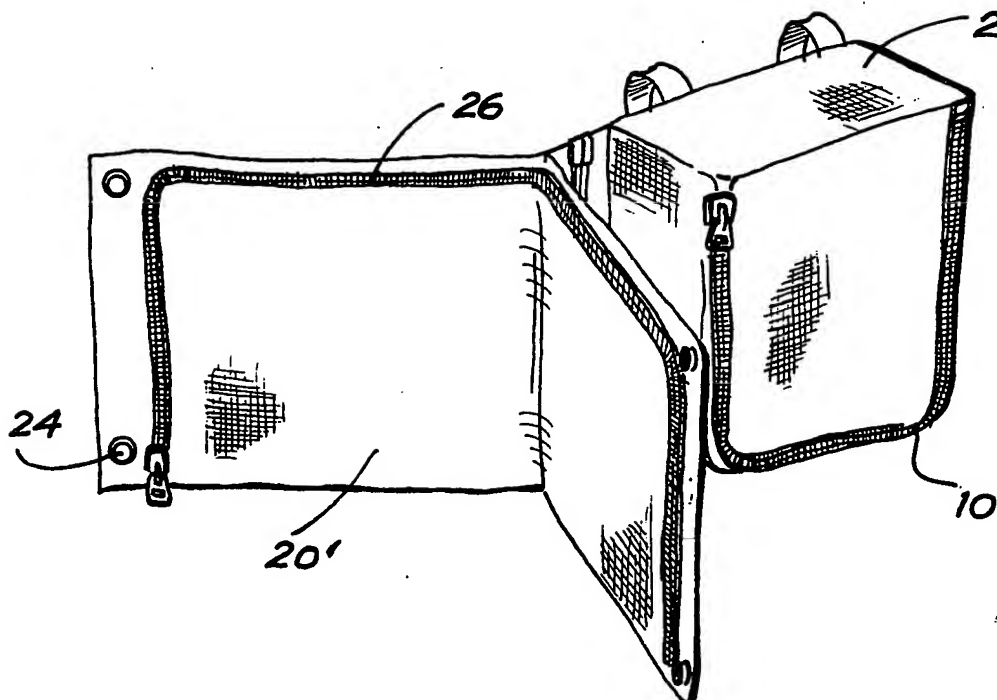
Primary Examiner—Stephen Marcus
Attorney, Agent, or Firm—Kane, Dalsimer, Kane, Sullivan and Kurucz

[57]

ABSTRACT

A back pack with shoulder straps has a flap along one rear side edge thereof and a pair of leaves are hingedly connected by a zip to said flap; the leaves form an envelope which opens out at right angle to the zip when the leaves are arranged in a packing position, enabling clothes to be received neatly into said envelope whereupon the leaves are wrapped around one another and the pack in a stouted position and secured; the envelope is detachable from the pack and has a handle to permit use as a release.

13 Claims, 7 Drawing Figures



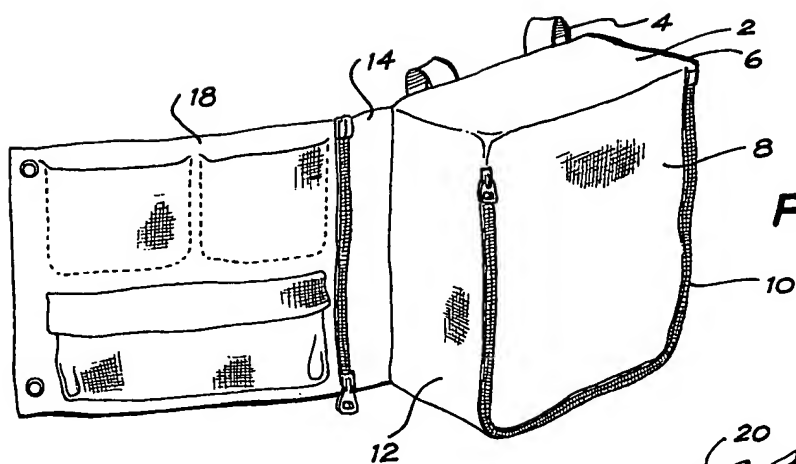


FIG. 1

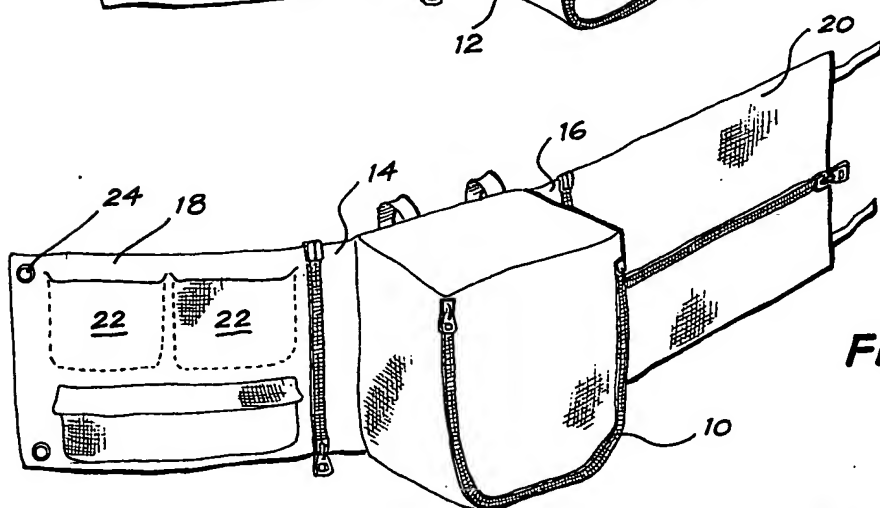


FIG. 6

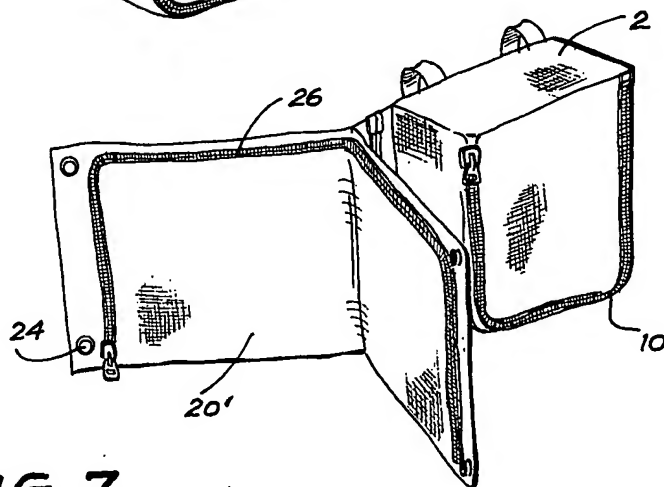


FIG. 7

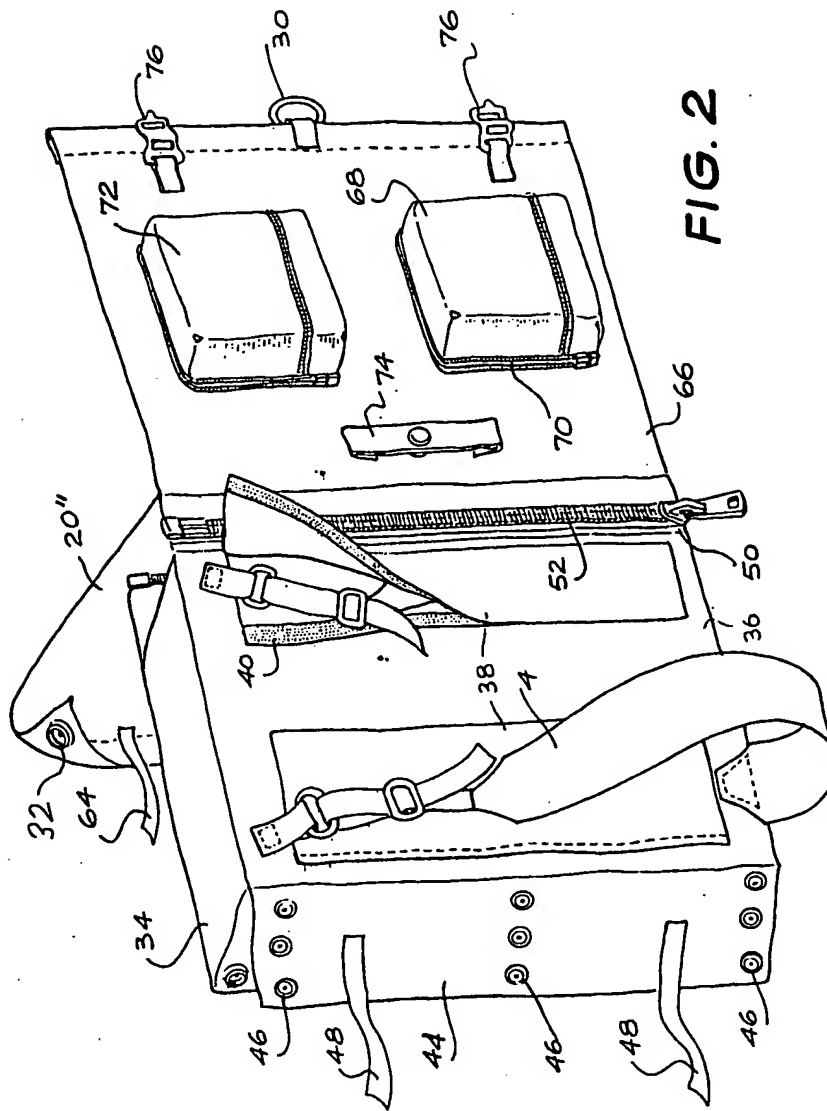


FIG. 2

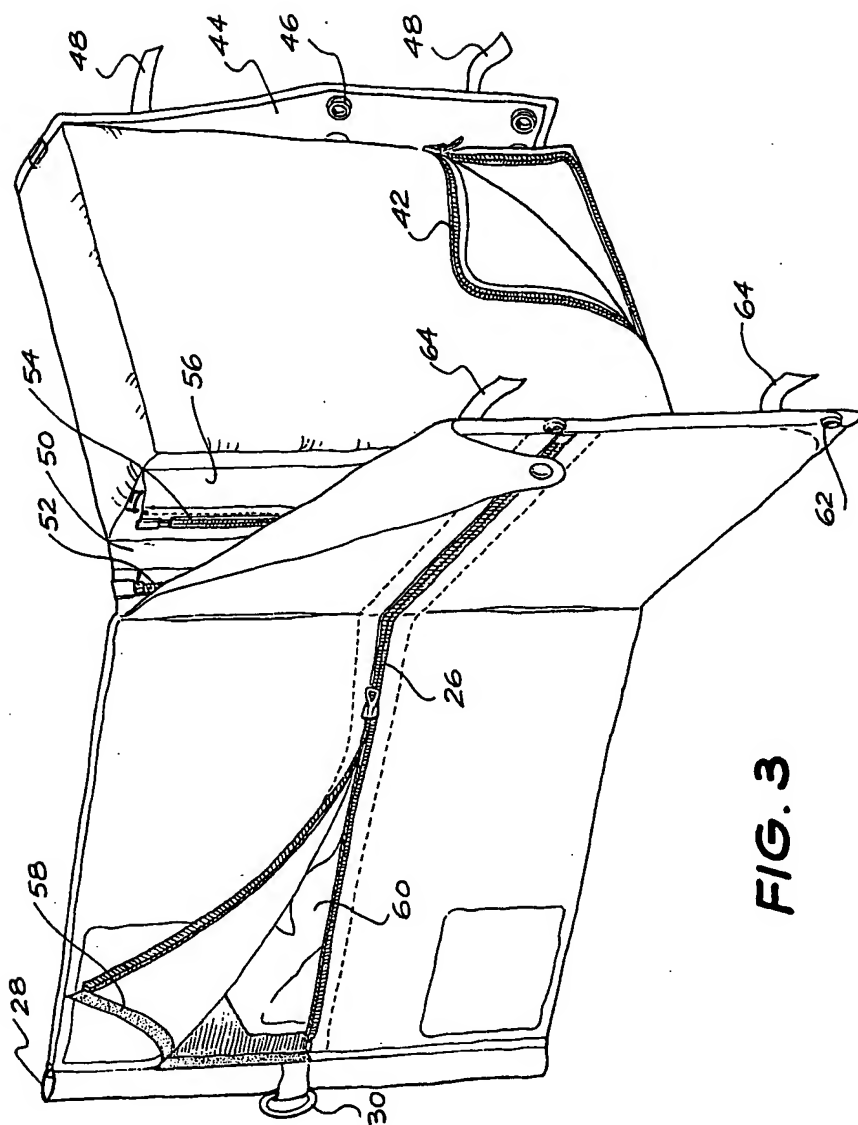
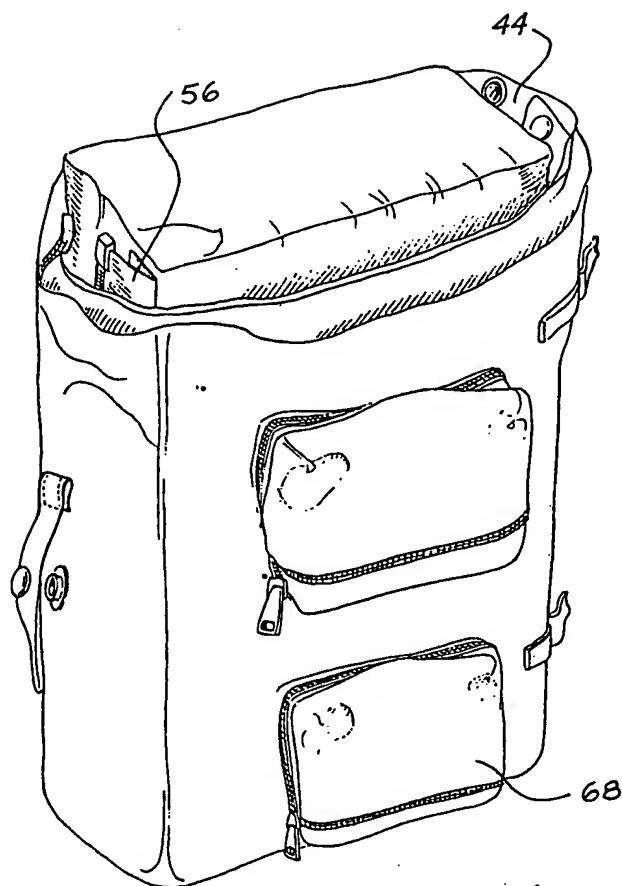


FIG. 3

**FIG. 4**

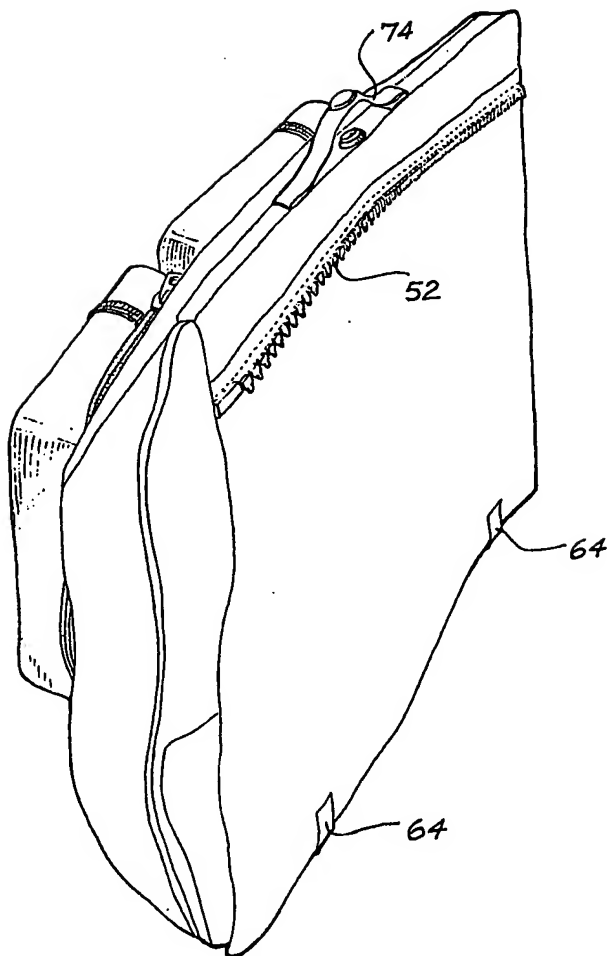


FIG. 5

1 BACKPACK

BACKGROUND OF THE INVENTION

This invention concerns traveller's pack. If a traveller wishes to use a known type of backpack, that is with an external frame and a separate bag, then several disadvantages are at once apparent. Firstly clothes put into the bag have their appearance spoiled by creases. Secondly items are difficult to retrieve unless the whole contents of the bag are unpacked. Thirdly, no check upon what has already been packed can easily be made once packing has begun unless the process is reversed.

SUMMARY OF THE INVENTION

This invention provides a traveller's pack comprising a multi-sided backpack having a rear face for contacting the wearer's back and shoulder straps secured to said face, said face having a pair of mutually opposite sides and a leaf having a fixed end and a free end, said fixed end being connected to one of said sides, said leaf being arrangeable in both a packing position in which it lies extended for supporting articles to be packed or unpacked and the stowed position in which it is wrapped around the backpack and is secured in that position to the backpack.

This invention also provides a traveller's pack comprising a backpack having a face for contacting the wearer's back and shoulder straps secured to the said face, said pack having a pair of mutually, opposite sides, first leaf connected to one of said sides, a second leaf connected to the mutually opposite side, both of said leaves being arrangeable in both a packing position in which they lie extended for supporting articles to be packed or unpacked and a stowed position in which they are wrapped around the backpack and each other and secured in that position to the backpack.

This invention further provides a traveller's pack comprising a backpack having a face for contacting the wearer's back and shoulder straps secured to said face, said pack having at least one straight side and an elongate leaf which leaf has a substantially central minor axis such that the leaf consists of two super-imposable halves, said leaf being connected along said minor axis to said straight side of the pack, each of the halves of the leaf being arrangeable in both a packing position in which they lie extended for supporting articles to be packed or unpacked and a stowed position in which they are wrapped around the backpack and each other and are secured in that position to the backpack.

There may be two leaves connected to the left and right hand side of the panel respectively, both of which are releasably securable to their respective opposite sides of the panel. But preferably there are two leaves connected to a common side of the pack and said leaves form one face of an envelope, the other face being formed by two flaps which are closable and securable to imprison within the envelope, items of clothing laid flat therein. Such envelope may be disconnectable from the pack and may be foldable along an axis perpendicular to the boundary of the conjoined flaps and there may be a carrying handle on the disconnectable face of the envelope which permits the envelope to be carried as a valise. The envelope may have a stiffening member at one end edge and a ring for suspending the envelope vertically as a clothes-tidy when the envelope is disconnected from the pack. The envelope may be connected to the pack by a zip of which one half of the stringers

project from the disconnectable face of the envelope while the other project from the first flap connected to the rear side edge of the backpack and there is a second flap connected to the front side edge of the pack with a spare zip stringer projecting therefrom, said first and second flaps being of such a width as will permit the pairing of the stringers on the flaps when the envelope is disconnected from the pack. The shoulder straps of the panel or pack may be stowable behind flaps which project from that face of the panel or pack which contact the wearers back and said flaps may be secured to the said face by hook and pile fasteners. The leaf which in the stowed position lies outmost may support a removable satchel.

Various embodiments of the invention will now be described by our example with reference to the drawings in which

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front perspective view of a backpack with a leaf shown in the packing position,

FIG. 2 is a rear perspective view of a further embodiment of a backpack with the leaves in the packing position,

FIG. 3 is a front perspective view of a backpack shown in FIG. 2,

FIG. 4 is a front perspective view of a backpack of FIGS. 2 and 3 with the leaves in the stowed position,

FIG. 5 is a perspective view of part of the backpack detached as a valise,

FIG. 6 is a front perspective view of a backpack with two leaves in the packing position, and

FIG. 7 is a front perspective view of a pack with a zip-closed envelope similar to that shown in FIG. 3.

DETAILED DESCRIPTION OF THE INVENTION

Referring firstly to FIG. 1 the pack comprises a bag 2 made of cotton duck fabric. The rear face of the bag 2 has two shoulder straps 4. The right side 6 of the bag has two central rows of press-studs (not shown). The front face 8 of the bag is closed by a zip 10. On the left side 12 of the bag is a flap 14. A leaf 18 is attached by a zip to the flap 14.

Referring now to FIG. 6, the construction is the same with the addition of a right hand leaf 20, attached to a right hand flap 16. The left hand leaf has two horizontal pockets 22 for flat items to be packed, for example a change of clothes. The leaf 18 has press-studs (not shown) on engaging complementary press-studs 24 for change of clothes. The right hand leaf 20 is constructed as an envelope with a central horizontal zip 26 which permits access to the interior thereof.

In FIG. 7, the leaf 18 is not present and instead an envelope 20' is attached along the central minor axis thereof so as to form a bifurcated structure capable of wrapping in two layers over the surface of the bag 2. Press studs 24 on the envelope 20' engage complementary studs on the hidden side of the bag.

Referring again to FIG. 6, in use the pack is laid on the ground with the leaves extended. The bag 10, the pockets 22 and the envelope 20 are filled and then the left hand leaf 18 is wrapped around the bag and attached to it by press-studs 24 after which the right hand leaf 20 is also wrapped around the bag and secured to the left hand leaf by press-studs 32.

Referring now to FIGS. 2 and 3, the panel 6 and integral frame is replaced by a frameless backpack 34 made of cotton duck. Shoulder straps 4 are sewn to the rear face 36 of the backpack and there are flaps 38 behind which the straps 4 may be neatly stowed. Hook and pile strips 40 close the flaps 38.

The front of the pack is closed by a zip fastener 42. The rear face of the pack 36 has an extending flap 44 to which three rows of three press-studs 46 are attached as well as two straps 48. The opposite side of the pack also has an extending flap 50 to which is sewn half the stringers of a zip fastener 52. A spare row of stringers 54 the purpose of which will be described later, is sewn to a flap 56. The mating row of stringers of the zip fasteners 52 is sewn to an off-center minor axis of an envelope 20" which is fastened by a longitudinally disposed zip 26 and hook and pile strips 58.

Envelope 20" is large enough to accommodate a jacket 60 and trousers (not shown) which are arranged on a clothes hanger in a flat condition within the envelope 20". One end of the envelope is stiffened by an aluminum strut (not shown) housed in a seam pocket 28 and the envelope is suspendable by a ring 30 as a clothes tidy when the envelope is detached from the bag. A further ring (not shown) serves to suspend a coat hanger inside the envelope. The opposite end of the envelope is provided with press-studs 62 and straps 64.

The front face 66 of the envelope carries a lower satchel 68 secured by a U-shaped zip fastener 70. The upper satchel 72 is likewise secured and has a shoulder strap (not shown) tucked into the U-shaped cavity. There is a carrying handle 74 on the central minor axis of the envelope and buckles 76 are located at the stiffened end thereof.

In the construction shown in FIG. 7 the envelope 20" is made of two rectangular superimposed sheets of fabric sewn together and provided with a zip 26 along three sides thereof.

The manner of use is as follows:

The pack is firstly divisible into two halves by unfastening the zip 52 and engaging the unused zip stringer of fastener 52 with the spare stringer 54 on flap 56. The flap 44 is secured to the side of the pack by the press-studs thereon. The backpack may be filled and worn separately. The envelope may be filled with clothes and the buckles 76 engaged by the straps 64 to permit the envelope to be carried by the handle 74 as a valise, as shown in FIG. 5.

Secondly, the zipping operation described above may be reversed and then the pack and envelope may be joined together by closing the zip fastener 52 whereafter one leaf of the envelope is wrapped compactly around the pack and secured by engagement of the press-studs 62 and 46. The remaining leaf hinges around the same axis as the first leaf and is superimposed and held by the straps 48 passing through buckles 76 as shown in FIG. 4.

The advantages of the first embodiment are simplicity of construction coupled with accessibility of the space afforded by the pack.

The advantages of the second embodiment are versatility arising from the capability of varying the volume of carrying space at ones disposal, the division into a valise and a backpack and the portability of clothes in a relatively crease-free condition.

The claims defining the invention are as follows:

1. A traveller's pack comprising a backpack having a face for contacting the wearer's back and shoulder

straps secured to said face, said pack having at least one straight side and an elongate leaf which leaf has a substantially central minor axis such that the leaf includes two superimposable halves, said leaf being connected along said minor axis to said straight side of the pack, each of the halves of the leaf being arrangeable in both a packing position in which they lie extended for supporting articles to be packed or unpacked and a stowed position in which they are wrapped around the back pack and each other and are secured in that position to the back pack.

2. A traveller's pack as claimed in claim 1 wherein the two halves of the leaf form one face of an envelope, the other face being formed by two flaps which are closable and securable to imprison within the envelope, items of clothing laid flat therein.

3. A traveller's pack as claimed in claim 2 wherein the envelope is disconnectable from the pack and is foldable along said minor axis and there is a carrying handle on the envelope which permits the latter to be carried as a valise.

4. A traveller's pack as claimed in claim 3 wherein said pack has a rear face, a rear flap extending from said rear face along said straight side and a front flap extending from said front face along said straight side and the envelope has a face which is connectable along said minor axis to the pack by a zip of which one half of the stringers project from said rear flap and the remaining half of the stringers project from said one envelope face while the front flap has a spare set of stringers as projecting therefrom, said front and rear flaps being of such width as permits a pairing of the stringers on the flaps when the envelope is disconnected from the pack.

5. A traveller's pack claimed in claim 2 wherein the envelope has an end edge and a stiffening member at said edge and an eye connected to said member for suspending the envelope vertically as a clothes tidy when the envelope is disconnected from the pack.

6. A traveller's pack as claimed in claim 2 wherein the half of the leaf which is in the stowed position lies outermost, supports a removable satchel.

7. A traveller's pack as claimed in claim 1 wherein the two halves of the leaf form one face of an envelope, the other face being formed by a superimposed sheet of fabric which is connected edge to edge with the leaves by a releasable fastener.

8. A traveller's pack comprising a backpack having a face for contacting the wearer's back and shoulder straps secured to said face; said pack having a pair of mutually opposite sides; a substantially rectangular envelope connected to one of said sides along an off-center minor axis thereof, said envelope being arrangeable in a packing position in which a first portion of said envelope on one side of said axis and a second portion of said envelope on the other side of said axis lie extended, and a stowed position in which said portions are wrapped around the backpack and each other.

9. A traveller's pack as claimed in claim 8 wherein said one of said sides of said backpack includes an extending flap to which is sewn half the stringers of a zip fastener, a mating row of stringers is sewn to the off-center minor axis of said envelope, said envelope being connected to said backpack by means of said stringers.

10. A traveller's pack as claimed in claim 9 wherein said one of said sides of said backpack includes a second flap having half the stringers of a zip fastener projecting therefrom, said flaps being of such width as to permit

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pairing of their respective stringers when the envelope is disconnected from the pack.

11. A traveller's pack as claimed in claim 8 wherein said envelope includes one face formed by a leaf and an opposite face formed by two flaps which are closable and securable.

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12. A traveller's pack as claimed in claim 8 wherein said envelope includes a carrying handle.

13. A traveller's pack as claimed in claim 8 wherein the envelope has an end edge, a stiffening member at said edge, and a ring connected to said member.

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United States Patent [19]
Sink

[11] Patent Number: **4,776,503**
[45] Date of Patent: **Oct. 11, 1988**

[54] **HUNTING, BACKPACKING AND CAMPING
ACCESSORY**

[76] Inventor: **Robert L. Sink, 4781 "B" Rd., New
Paris, Ohio 45347**

[21] Appl. No.: **23,516**

[22] Filed: **Mar. 9, 1987**

[51] Int. Cl.⁴ **A45F 4/02; E04G 1/00**

[52] U.S. Cl. **224/153; 224/210;
182/187**

[58] Field of Search **224/151, 153, 154, 155,
224/210, 211, 261, 262; 182/187; 108/152**

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pp. 97-99 of Bow and Arrow Bowhunter's Annual, No. 11, 1986.

Primary Examiner—Henry J. Recla

Assistant Examiner—Robert Petrik

Attorney, Agent, or Firm—Biebel, French & Nauman

[57] **ABSTRACT**

A combination hunting, backpacking and camping accessory that can be used as a hunter's climbing seat, a blind support, a backpack or a portable shelf for camp sites is formed from a pair of interconnected frame components each having first and second sections, a cross brace attached to the first sections and a support member releasably secured to the second sections. A cable or other flexible member is fixed at one end to the cross brace, has a series of stops attached to it along its length and is received in an open notch in the cross brace. When used as a climbing seat the cable is wrapped around a tree with the first sections extending downwardly, but when used as a backpack the accessory is reversed and the cable wrapped around the wearer's waist. When used as a shelf or a blind support the support member may be removed and replaced with extensions slipped over the second sections.

10 Claims, 3 Drawing Sheets

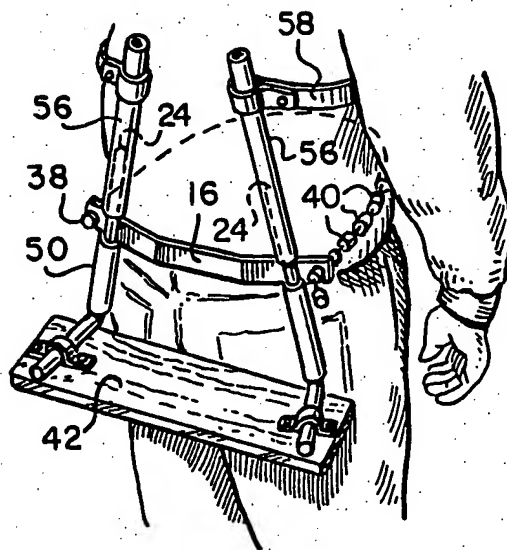


FIG-1

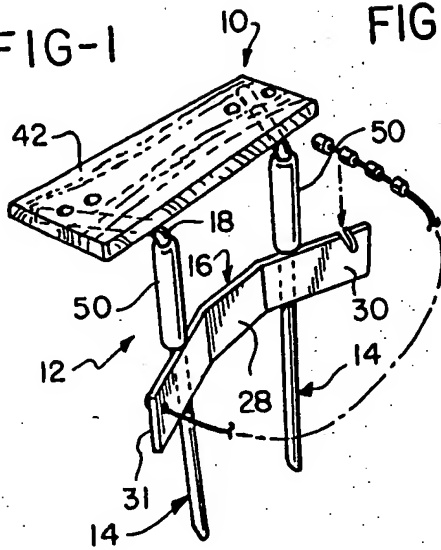


FIG-2

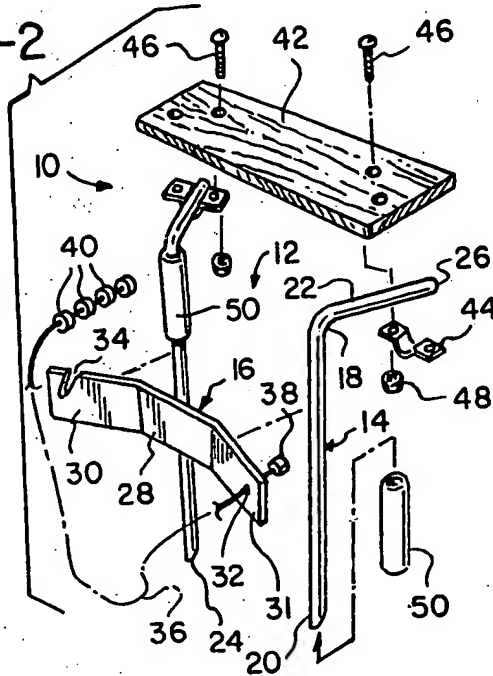


FIG-3

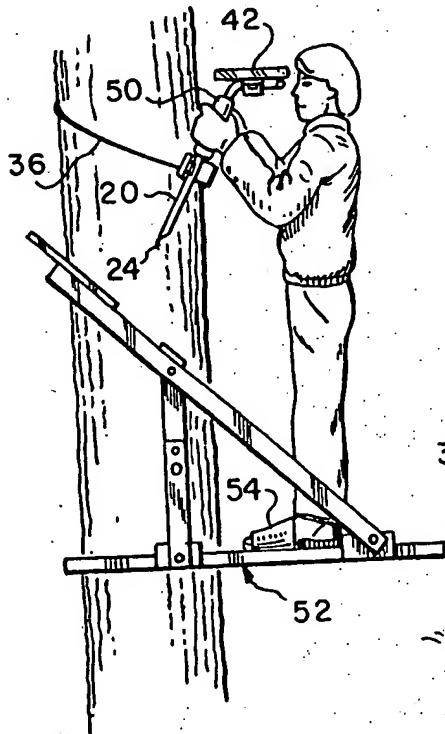


FIG-4

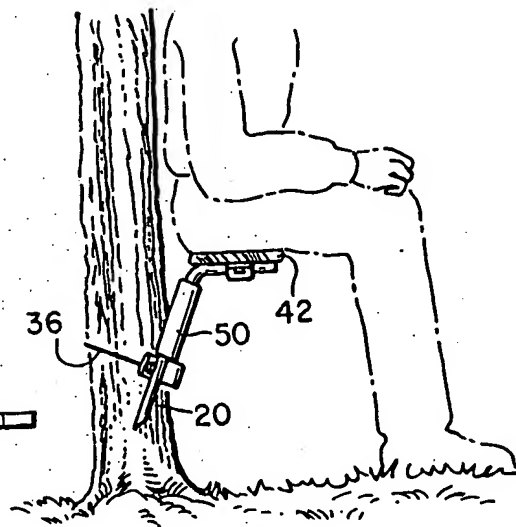


FIG-5

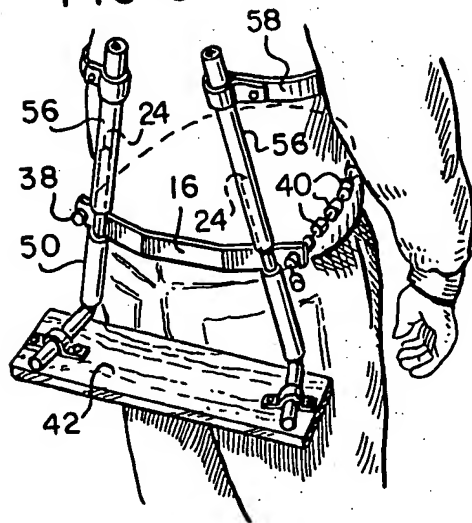


FIG-6

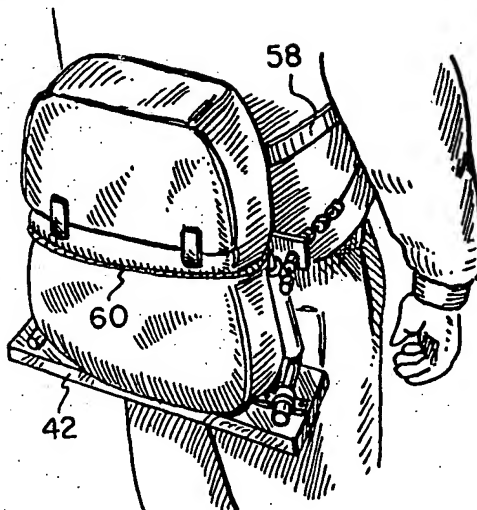


FIG-7

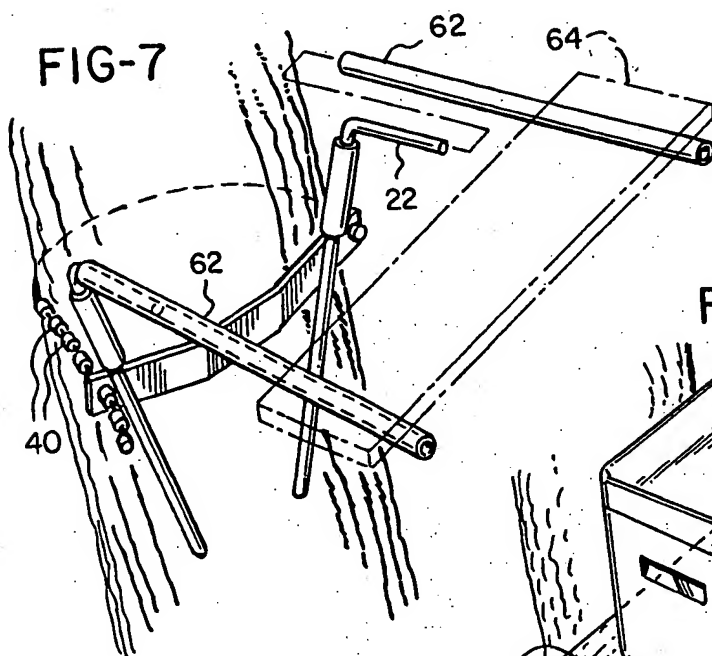


FIG-8

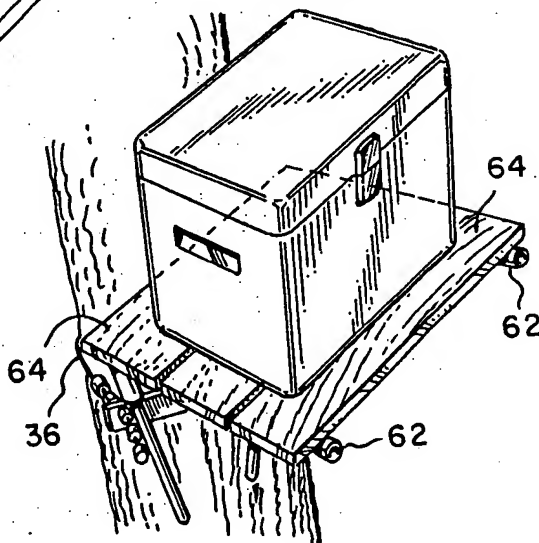


FIG-9

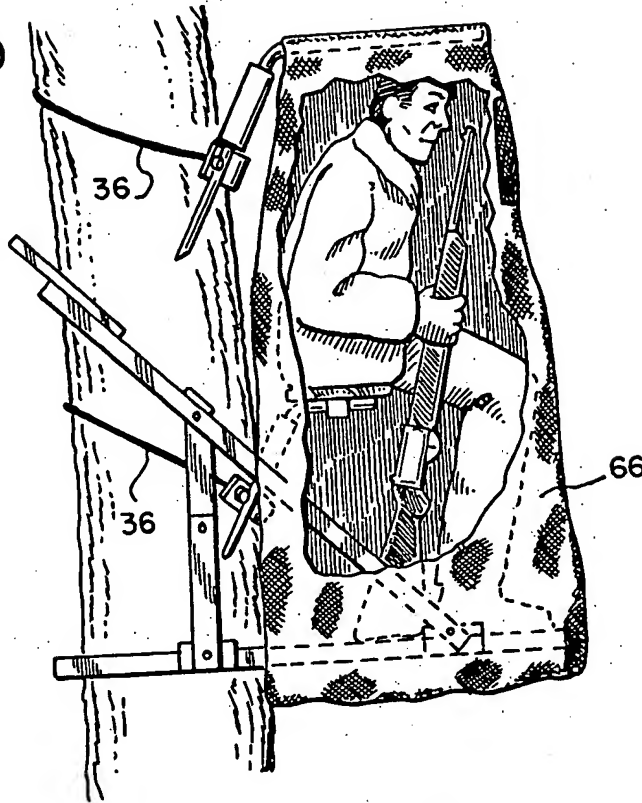
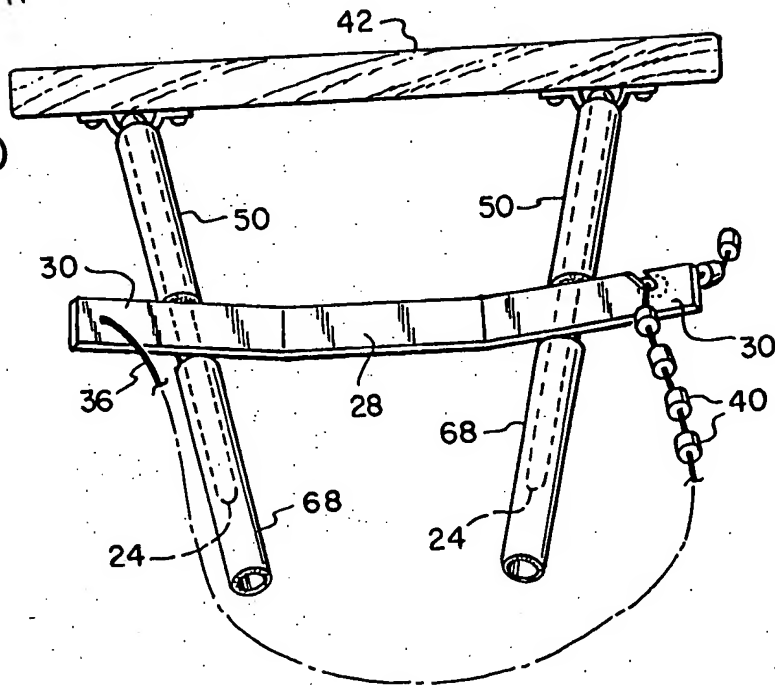


FIG-10



HUNTING, BACKPACKING AND CAMPING ACCESSORY

BACKGROUND OF THE INVENTION

It is often desirable to hunt from a tree stand, and a number of devices have been designed for this purpose. For example, see Bow & Arrow magazine's Bowhunter's Annual, No. 11, 1986, pp. 97-99, wherein a variety of tree stands are illustrated. Some, such as that identified on p. 98 as the JVA-ASTRO, can be used as a so-called "climbing seat", in that they are intended to be used in conjunction with a tree stand to climb to a desired height along a tree trunk.

A similar device is described in U.S. Pat. No. 4,600,081, where a seat is shown that can be used in connection with other tree platforms. Although not disclosed specifically as a hunter's climbing seat, the device shown in U.S. Pat. No. 2,991,842 is attached to a tree by a chain to provide a seat. Also, U.S. Pat. No. 683,527 describes a scaffold primarily for linemen which includes a seat adapted to be attached to a utility pole by a chain.

SUMMARY OF THE INVENTION

In accordance with the present invention a lightweight, hunter's climbing seat is provided which is of simple but efficient design, and which can be used, not only as a climbing seat, but also as a backpack, a camp shelf and a frame for a hunter's blind.

Thus, the combination climbing seat, backpack, camp shelf and blind-support of the present invention includes a pair of primary frame components having first and second sections and a cross brace interconnecting the components to provide a basic framework, a cable or other flexible member for securing the framework to members of varying girths, and a support member attached to the framework.

The primary frame components may conveniently be constructed from round metal bar stock bent intermediate its ends to form the first and second sections. The cross brace may be formed from a strip of flat metal stock and welded to the first sections of the components, with outer ends of the cross brace having the cable fixed to one of them and adjustably attached to the other. The support member spans the second sections and is releasably secured to them to form a seat or a pack board.

When used as a climbing seat the first sections are positioned to extend along a tree trunk with their sharpened lower distal ends digging into the trunk and with the second sections projecting outwardly, approximately horizontally, above the first sections to receive the support member as a seat.

When used as a backpack the device is inverted from the orientation used in the climbing seat configuration and the first sections then extend upwardly along the wearer's body, the second sections and support member project outwardly beneath the first sections to receive the load, and the cable or other flexible member encircles the wearer's waist. In this mode pipes or other tubular members can be slipped over the first sections and their sharpened ends, and a tarp strap or the like secured to the pipes and passed around the wearer's chest for enhanced stability.

In the camp shelf mode the device is attached to a tree in the same manner as in the climbing seat configuration, but the clips securing the supporting member to

the second sections may be unfastened, allowing removal of the support member. Thereafter, extensions, such as lengths of pipe, may be slipped over the second sections to serve as a support for boards, branches or other material placed on them to provide a shelf of sufficient area to accommodate a camp stove, cooler or other camping equipment.

Similarly, a frame for a hunter's blind can be provided by removing the support member, placing extensions of suitable length over the second sections, positioning the device on a tree at the desired height, and then draping camouflage netting or other material over the extensions. In this regard a second device with the support member attached can be used as a seat within the blind.

The first sections diverge outwardly away from each other from their distal ends to their opposite ends, and the second sections diverge outwardly away from each other from their inner ends to their outer ends. With this construction a wide variety of tree trunk diameters can be accommodated and the distal ends of the first sections are urged into the tree trunk by the supported weight; and the support member will not slip off the second sections even though the securing clips are somewhat loosened.

When climbing a tree using the device of the present invention the climber grasps the first sections intermediate the cross brace and the support member to support his weight and that of the tree stand attached to his feet as he, for example, draws the stand upwardly, and in the preferred embodiment of the invention hand grips of rubber, plastic or any other suitable material, are received on the first sections to facilitate this maneuver.

While any suitable flexible member may be used for attaching the device to a tree or wearer, a high strength steel cable has been found to function satisfactorily, with one end of the cable attached to, for example, one outer end of the cross brace. An angularly disposed, open notch formed in the other outer end of the cross brace receives the other end of the cable and a plurality of aluminum slip rings are crimped to the cable to form a set of spaced stops.

Thus, it will be seen from the above and the following detailed description that the present invention provides a climbing seat that can also function as a backpack, and with simple modifications, a camp shelf and a frame for a hunter's blind, in a lightweight, simple and efficient construction.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the present invention; FIG. 2 is an exploded perspective view thereof;

FIG. 3 shows the present invention used as a climbing seat in conjunction with a tree stand;

FIG. 4 shows the invention used as a seat;

FIGS. 5 and 6 illustrate the invention in a backpack mode;

FIGS. 7 and 8 show the conversion to a camp shelf;

FIG. 9 illustrates a hunter's blind wherein the invention serves as a supporting frame for camouflage material; and

FIG. 10 is an elevational view of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference initially to FIGS. 1, 2 and 10, it will be seen that the combination hunting, backpacking and

camping accessory 10 of the present invention includes a framework 12 including a pair of primary frame components 14 and a cross member 16.

Each frame component may be constructed of a round metal rod provided with a bend, as at 18, defining first and second sections 20 and 22, respectively, angularly disposed with respect to each other at an obtuse included angle.

First sections 20 diverge outwardly away from each other from sharpened distal ends 24 to their opposite ends at the bends 18, and second sections 22 diverge outwardly away from each other from their ends located at bends 18 to their outer distal ends 26.

The cross member 16 is fixed by welding or the like to each of the first sections 20, and has a central portion 28 and a pair of outer wing portions 30 and 31, each defining an obtuse included angle with the central portion 28. Parts of the wing portions project outwardly beyond their point of juncture with the first sections 20 and one of these parts 31 is provided with an aperture 32 while the other part 30 has an angularly disposed notch 34 opening toward the bends 18.

A flexible member 36, such as a steel cable or the like, has one end received in the aperture 32 and a plurality of slip rings fixed along its length by crimping to form an anchor 38 at the end received in aperture 32 and a series of spaced stops 40 designed to engage the sides of the notch 34. It will be noted that in FIG. 1 of the drawings the notch is positioned on the right-hand side of the unit to accommodate a right-handed person when the unit is being used, for example, as a climbing seat and on the left-hand side in FIG. 2 to accommodate a left-handed person.

A support member 42 in one mode of the invention spans the second sections 22 and is releasably secured thereto by means of clips 44, bolts 46 and nuts 48. It will be noted that when desired the nuts may be removed from the bolts to allow ready removal of support member 42, but because of the angular relationship of the second sections 22 the support member will not slide off the second sections even if the nut, bolt and clip fastening is loosened.

As will presently be described, when used as a climbing seat the accessory 10 is gripped at the first sections 20 intermediate the cross member 16 and the bends 18, and to accommodate the hands of the user tubular hand grips 50 are received on first sections 20.

Thus, as seen in FIG. 3 of the drawings, when used in conjunction with a conventional tree stand 52 having foot straps 54 the user of the climbing seat grasps the hand grips 50, and by bending his legs draws the tree stand 52 upwardly. He thereafter straightens his legs, at the same time moving the climbing seat farther up the tree trunk. If the trunk diminishes in diameter, the effective length of the cable 36 may be shortened by engaging successive ones of the stops 40 with the sides of the slots 34. Similarly, if an outwardly projecting branch is encountered during the climbing operation the cable 36 can be removed from the notch 34, the climbing seat moved up beyond the branch, and the cable reengaged with the slot 34.

Of course, if it is desired to simply use the present invention as a seat at ground level it can be attached to a tree or other vertically extending member as shown in FIG. 4 of the drawings.

When it is desired to use the present invention as a backpacking device, it is inverted from the position shown in FIGS. 3 and 4 of the drawings to that shown

in FIGS. 5 and 6. Additionally, pipes 56 may be slipped over the outer ends of the first sections 20 to both cover the sharpened ends 24 and provide an extension to which a strap 58 may be attached and passed around the chest of the wearer for greater stability. The cable 36 is, of course, passed around the waist of the wearer and adjusted to his or her girth by means of the spaced stops 40, and an elastic cord 60 or the like may be used as shown in FIG. 6 to secure the load carried to the backpack.

With reference to FIGS. 7 and 8 of the drawings, it will be seen that the present invention can be quickly modified to serve as a camping accessory for supporting a camp stove, cooler or other camping equipment. To accomplish this the nuts and bolts 46 and 48 and clips 44 are removed and pipe extensions 62 of suitable length are slipped over the second sections 22 of the main components 14. Thereafter one or more boards 64, branches or other shelf-defining members may be placed across the extensions 62 to provide a camp shelf as shown in FIG. 8.

When so modified the present invention can also function as a framework for a hunter's blind as shown in FIG. 9 of the drawings. In this case, instead of placing boards or the like across the extensions 62, camouflage netting 66 can be draped over the frame provided by the present invention, providing a hunter with a convenient blind. If desired a tree stand and climbing seat as shown in FIG. 3 of the drawings can be used in conjunction with the blind, as also shown in FIG. 9.

In some instances it may be desirable to store or carry the present invention, and in this case it may be desirable to provide sheaths 68 of any suitable, tubular material, as shown in FIG. 10 of the drawings, to prevent inadvertent injury or damage by the sharpened ends 24 of the primary frame components.

From the above it will be seen that the present invention provides a combination hunting, backpacking and camping accessory of lightweight, simple, but highly efficient construction, which can be easily converted from one mode of use to another with a minimum of additional components and tools.

While the articles herein described constitute preferred embodiments of the invention, it is to be understood that the invention is not limited to these precise articles, and that changes may be made therein without departing from the scope of the invention which is defined in the appended claims.

What is claimed is:

1. A combination hunting, backpacking and camping accessory comprising:
 - a framework for said accessory including a pair of primary frame components fixed with respect to each other,
 - said frame components comprising:
 - first sections having distal ends and ends opposite said distal ends, and
 - second sections having distal ends and ends opposite said distal ends joined to said opposite ends of said first sections,
 - said first and second sections being angularly disposed with respect to each other,
 - said first sections diverging outwardly away from each other from their distal ends to their opposite ends,
 - said second sections diverging outwardly away from each other from their opposite ends to their distal ends, and

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flexible securing means attached to said framework and having an adjustable effective length for securing said framework to members of varying girths.

2. The combination of claim 1 wherein said framework further includes a cross member attached to and interconnecting said components.

3. The combination of claim 1 further comprising: support means for supporting a user when said accessory is used as a tree stand and for supporting an object when otherwise used spanning said second sections, and means releasably securing said support member to said second sections.

4. The combination of claim 1 wherein said first and second sections are formed from a continuous member having a bend intermediate its ends.

5. The combination of claim 1 wherein: said framework further includes a cross member attached to and interconnecting said frame components,

parts of said cross member extend outwardly beyond said frame components, and said flexible securing means attached to said outwardly extending parts of said cross member.

6. The combination of claim 1 wherein: said framework further includes a cross member attached to said first sections intermediate said distal and opposite ends thereof, and hand grips mounted on said first sections intermediate said opposite ends thereof and said cross member.

7. The combination of claim 1 wherein: said framework further includes a cross member attached to and interconnecting said frame components,

said cross member has outer wing portions extending outwardly beyond said frame components, and said flexible securing means is fixed at one end to one of said wing portions and releasably engages the other of said wing portions.

8. The combination of claim 1 wherein said distal ends of said first sections are sharpened.

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9. The combination of claim 1 wherein said flexible securing means has a plurality of stops fixed to it along its length.

10. A combination hunting, backpacking and camping accessory comprising:

a framework of or said accessory consisting of a pair of round metal rods and a flat metal strap, each of said rods having a bend at an obtuse included angle intermediate its length defining first and second sections,

said first section being substantially longer than said second section and having a sharpened distal end and an opposite end joined to said second section at said bend,

said first sections diverging outwardly away from each other from said distal ends thereof to said bends,

said second sections having outer ends and diverging outwardly away from each other from said bends to said outer ends thereof,

said strap having a central portion and a pair of outer wing portions each defining an obtuse included angle with said central portion,

said wing portions being welded to said first sections intermediate their lengths with parts of said wing portions extending outwardly beyond said first sections,

a cable fixed at one end to one of said parts of said wing portions,

a plurality of slip rings crimped on said cable and fixed with respect thereto,

means defining a notch in the other of said parts of said wing portions opening toward one of said bends,

said notch having a width greater than the diameter of said cable but less than the diameter of said slip rings,

a support member spanning said second sections, means for releasably securing said support member to said second sections, and

tubular hand grips received on said first sections intermediate said bends and said strap.

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United States Patent [19]

Monzingo

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[45] Date of Patent: Oct. 8, 1996

[54] **MODULAR BACKPACK PANNIER
LUGGAGE**

[76] Inventor: **Damon P. Monzingo**, P.O. BOX 60370,
Fairbanks, Ak. 99706-0370

[21] Appl. No.: 359,741

[22] Filed: Dec. 20, 1994

[51] Int. Cl.⁶ A45F 4/02

[52] U.S. Cl. 224/153; 224/154; 224/575

[58] Field of Search 224/153, 151,
224/209, 210, 214, 154, 156; 190/102,
110, 109

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Primary Examiner—David J. Walczak

[57] **ABSTRACT**

A modular backpack which may be reconfigured into luggage or carrying articles. The assembly includes first and second backpacks each of which may be separated into upper and lower compartments. The lower compartments may then be coupled together to form a transportable piece of luggage, and the upper compartments are similarly coupleable to form a further piece of luggage. The assembly also includes a tent extendable from the backpack, as well as an extensible elastic pack cover for protecting the backpack from rain or the like.

16 Claims, 12 Drawing Sheets

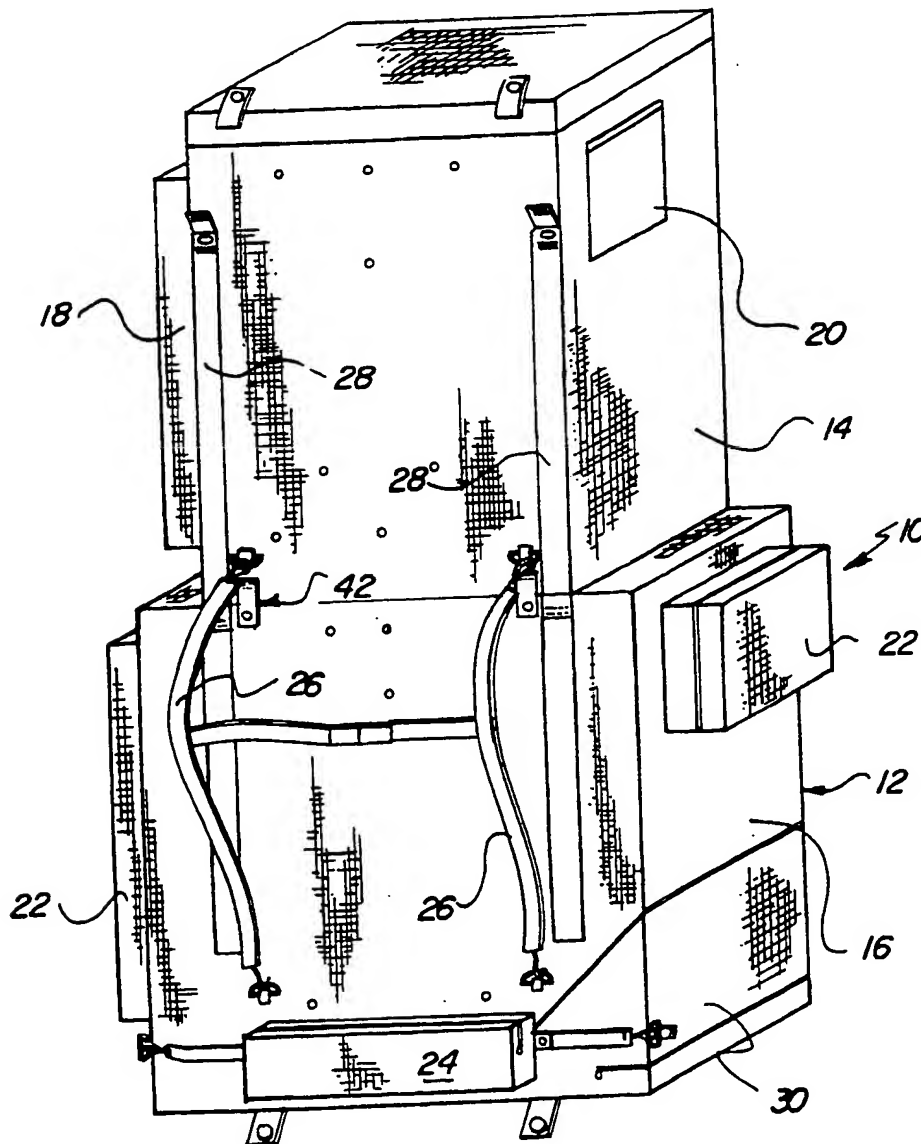


Fig. 2

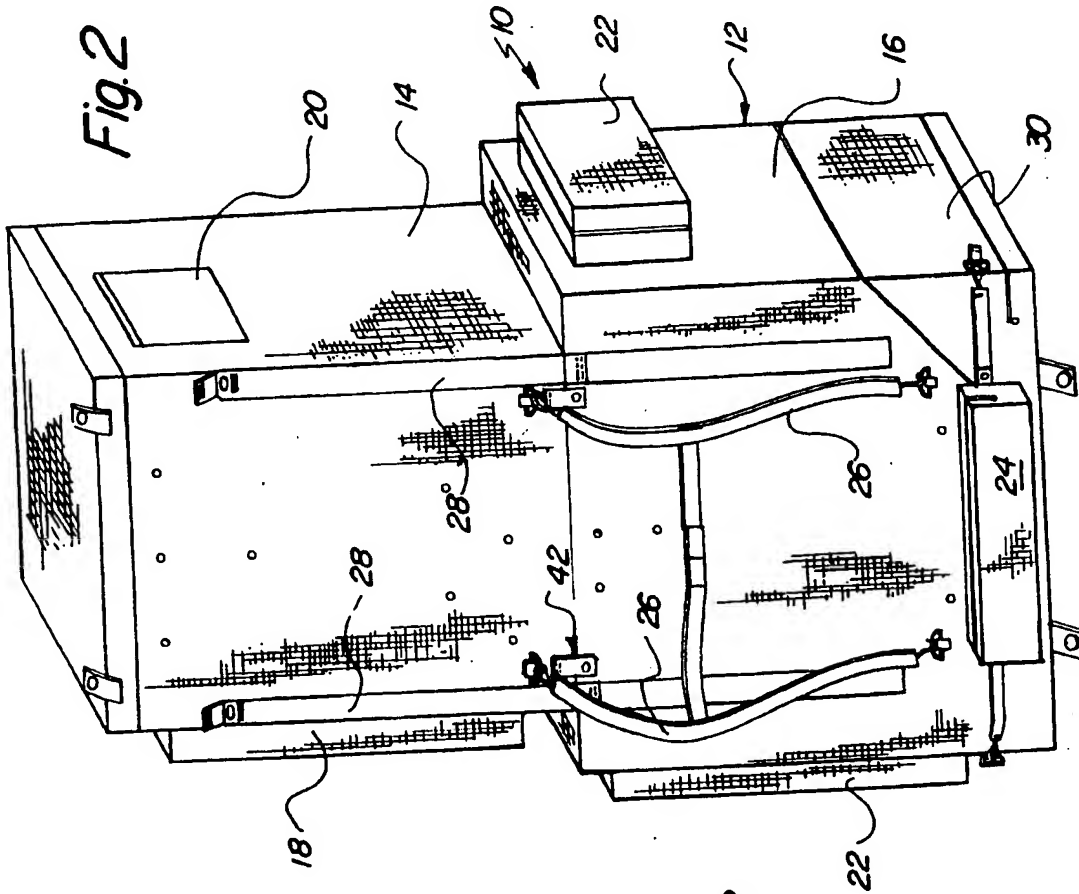
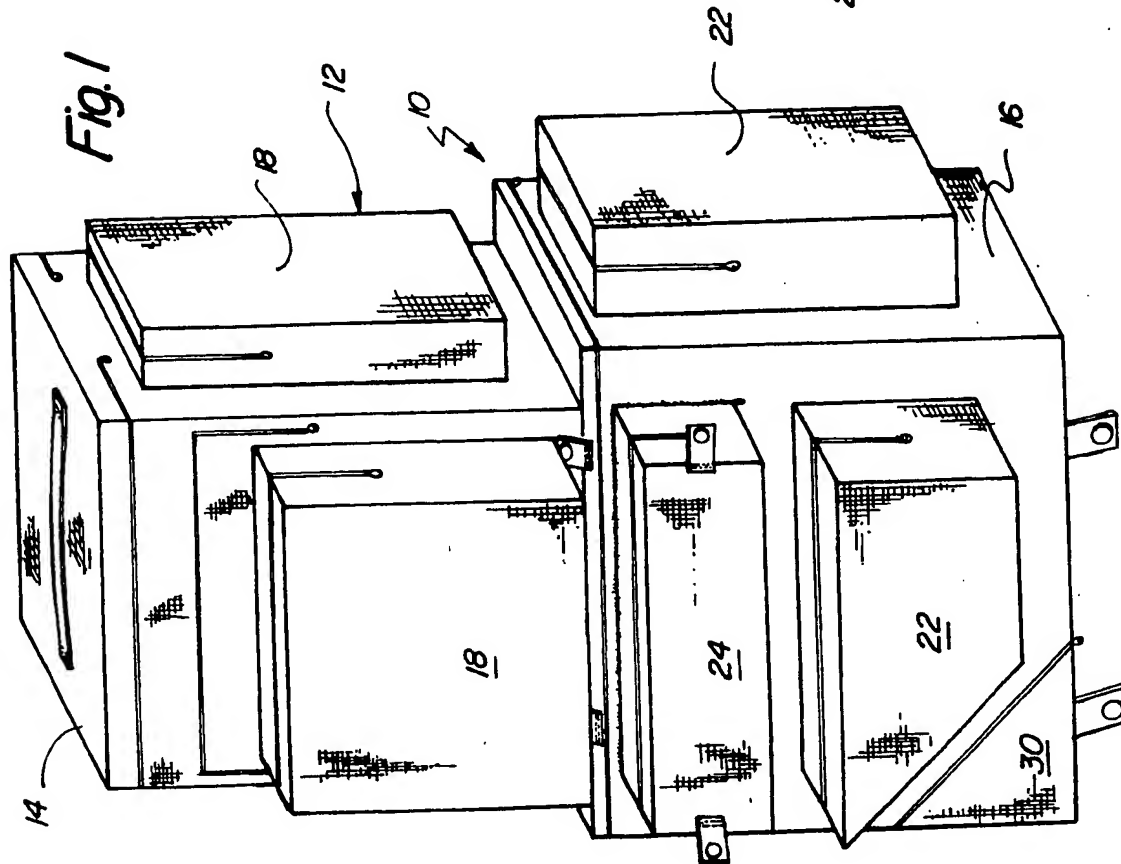
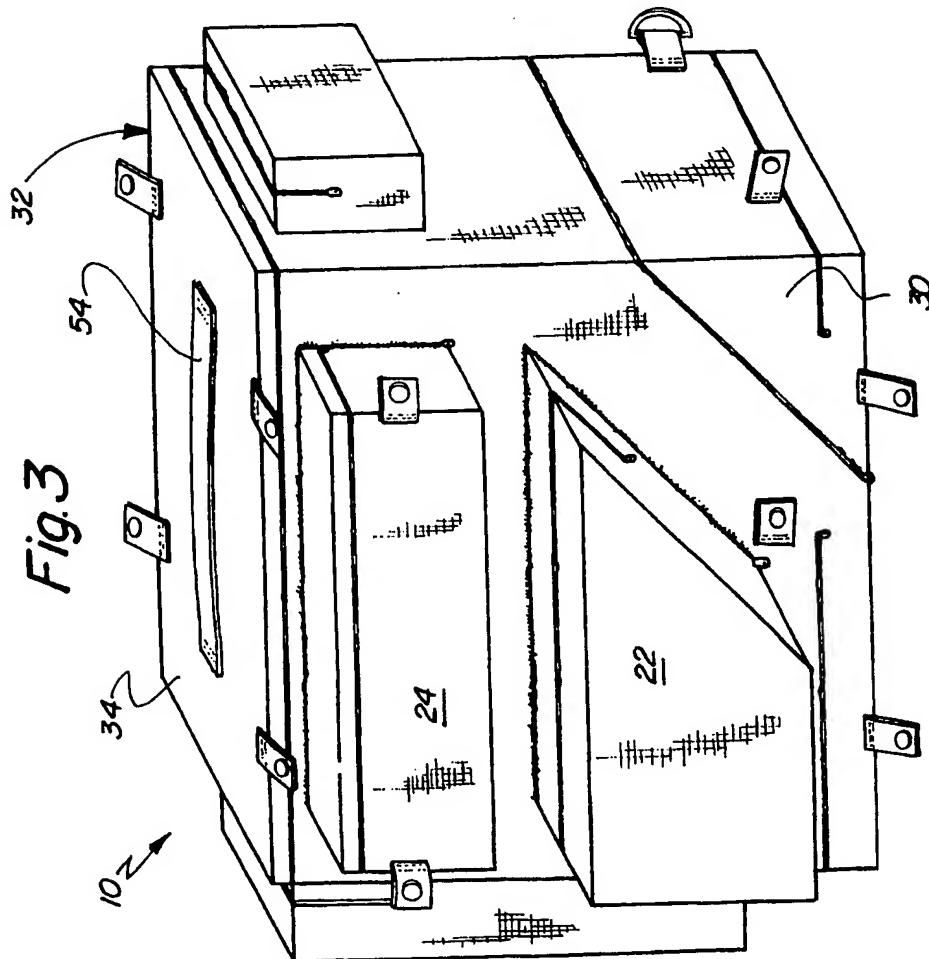
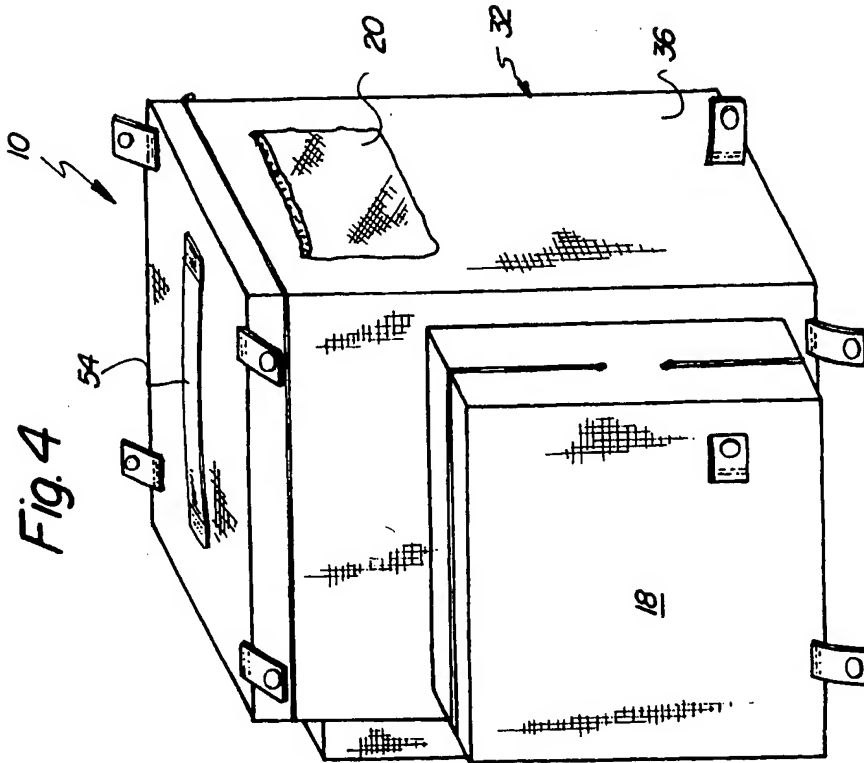
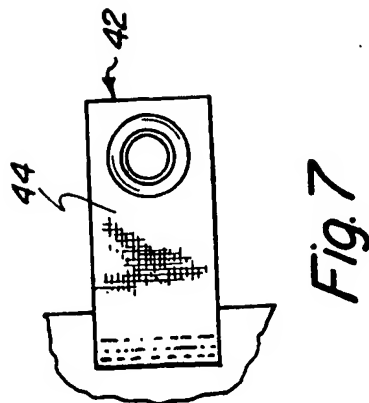
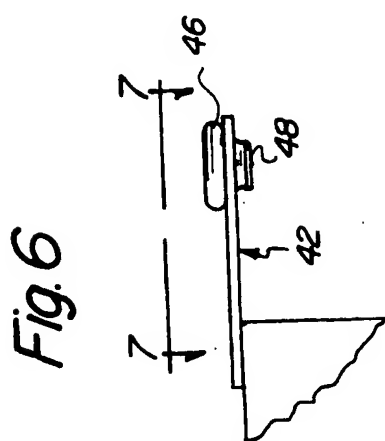
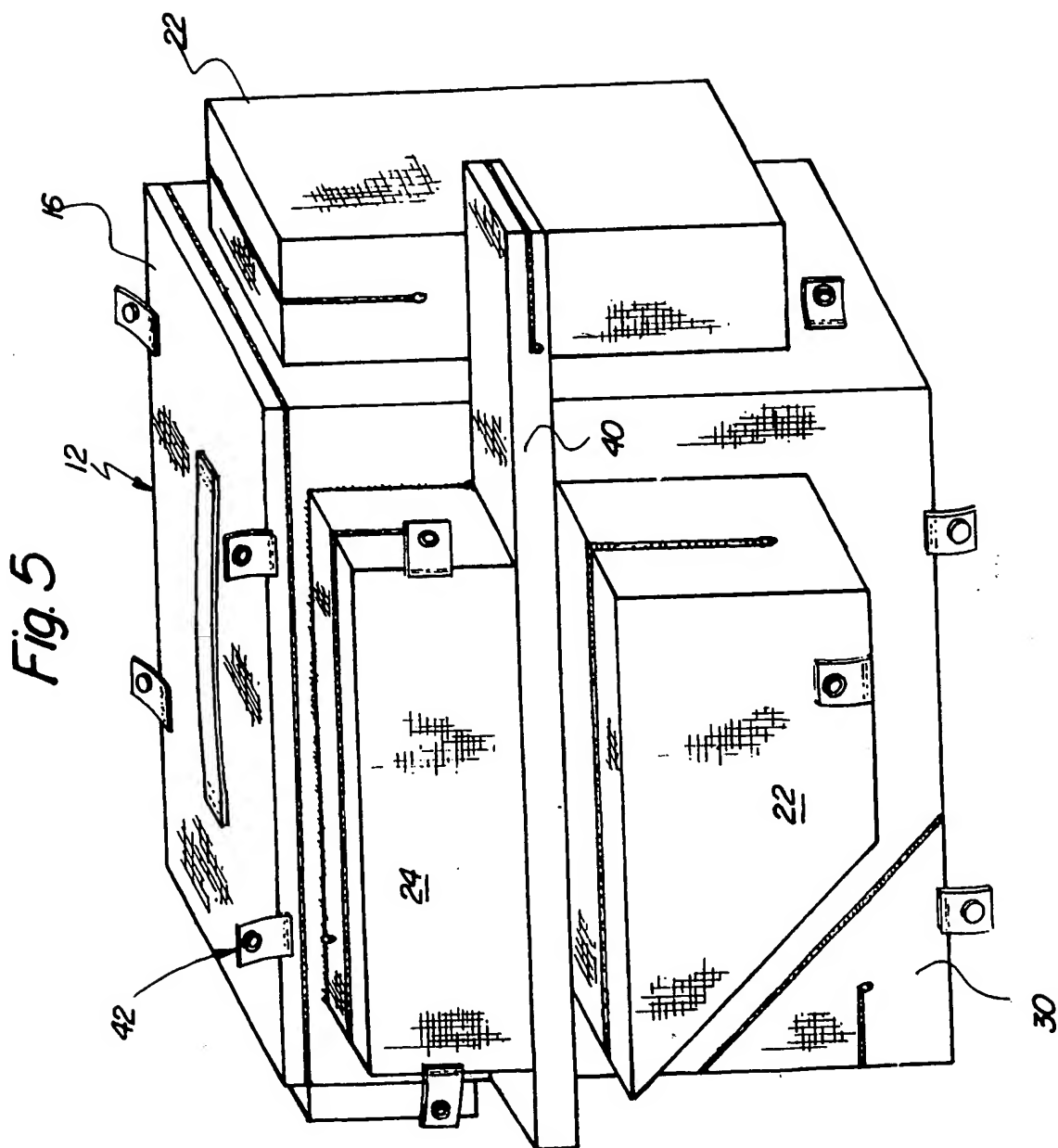


Fig. 1







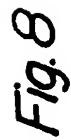
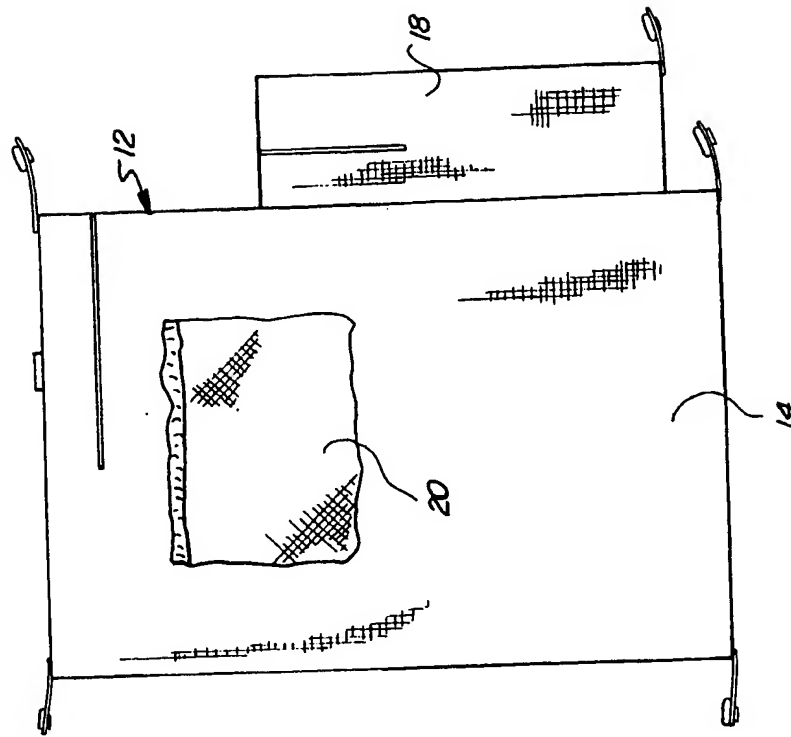
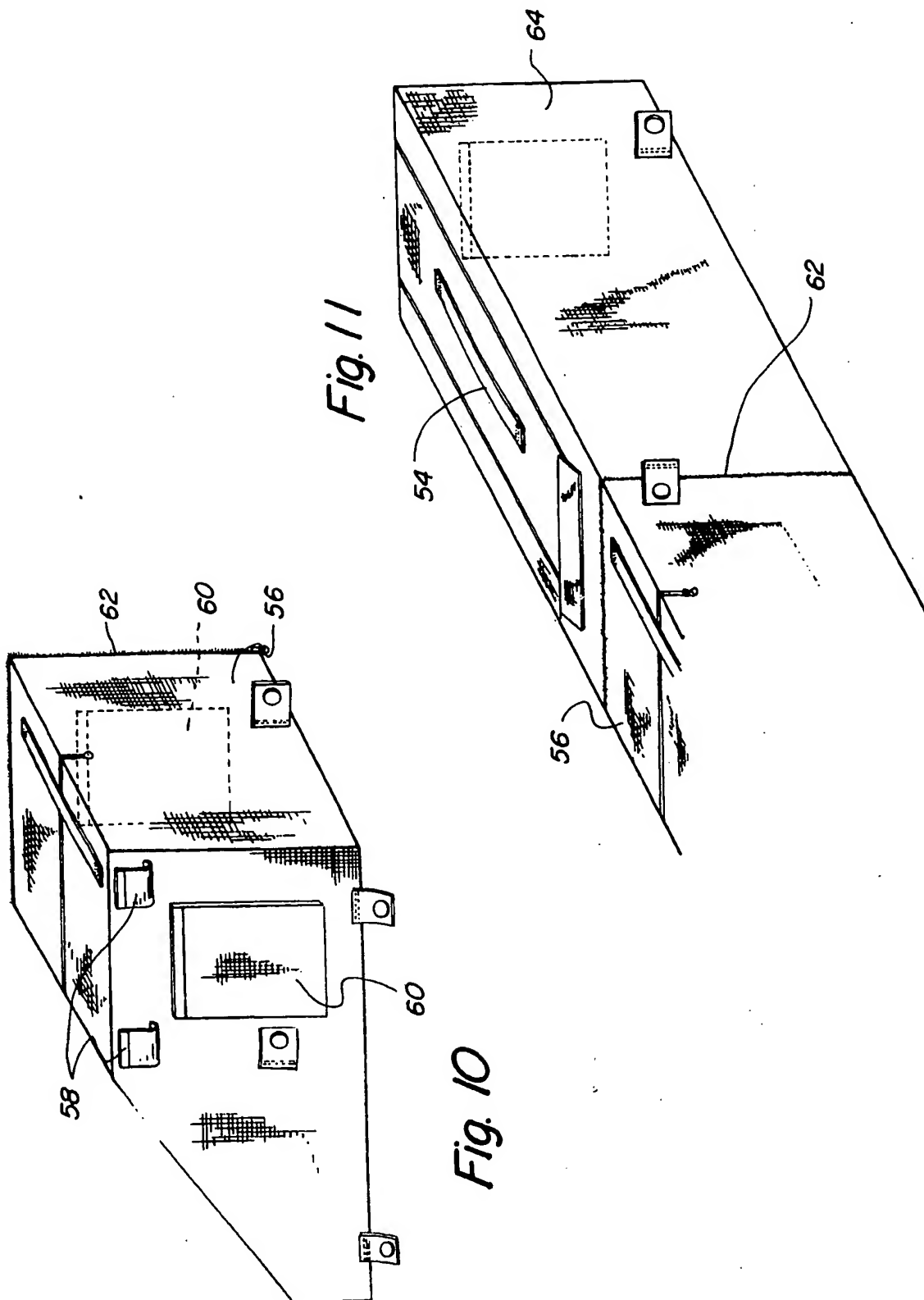


Fig. 9





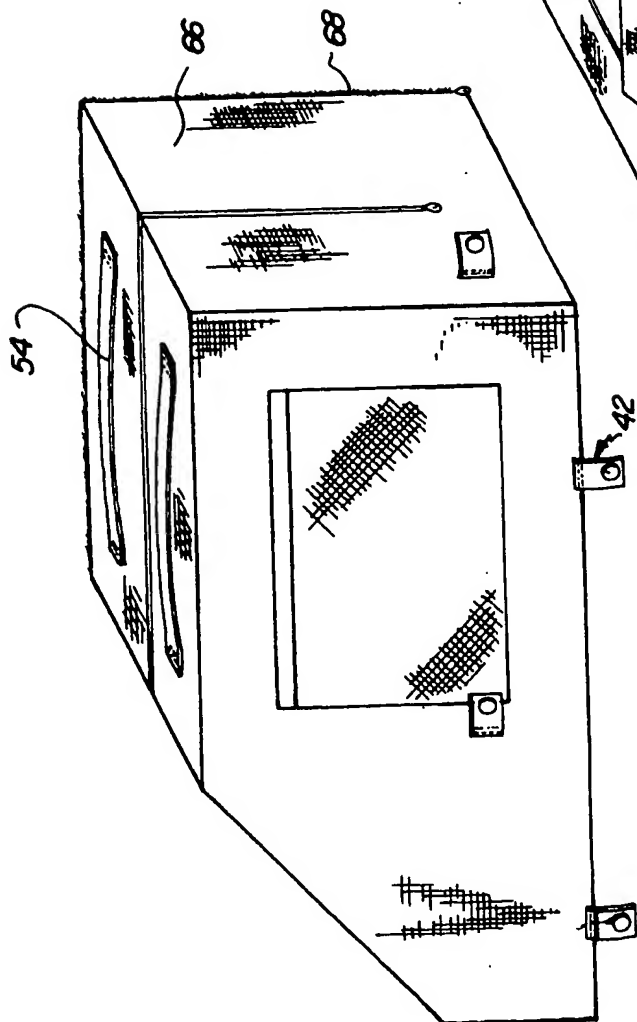
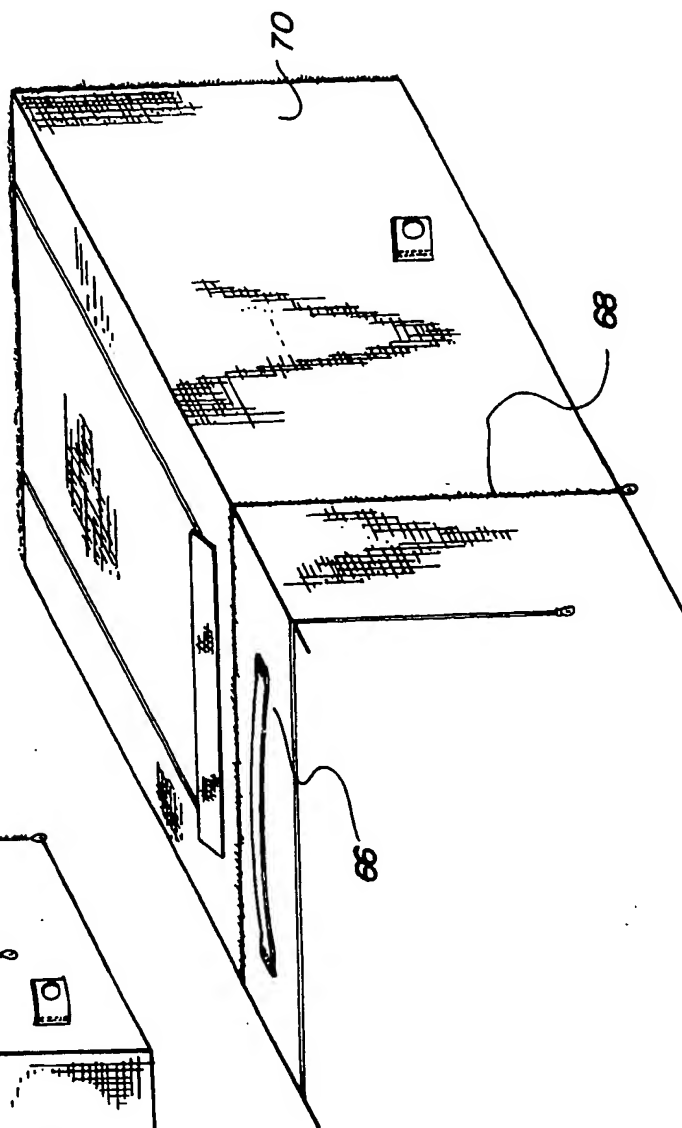
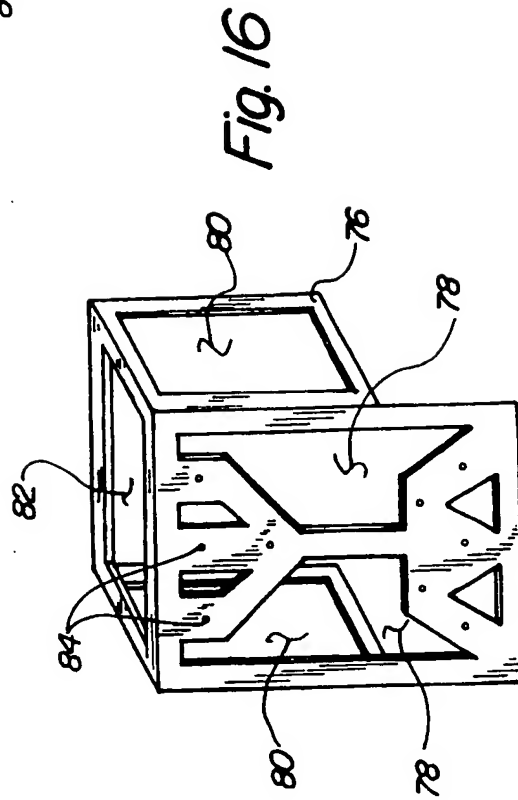
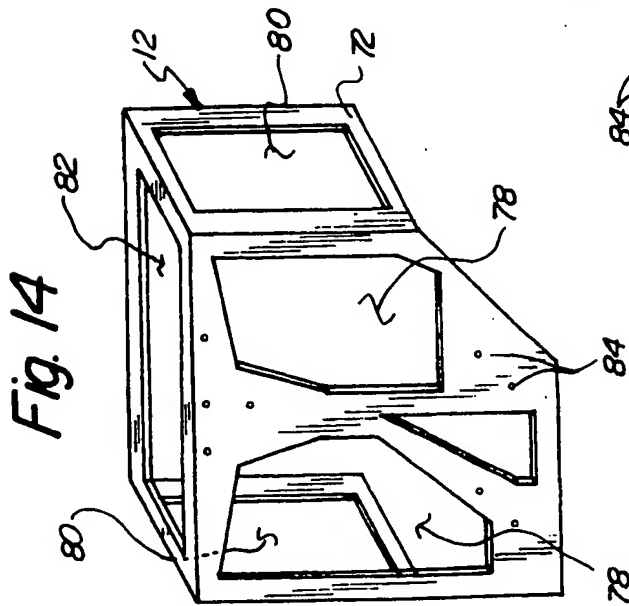
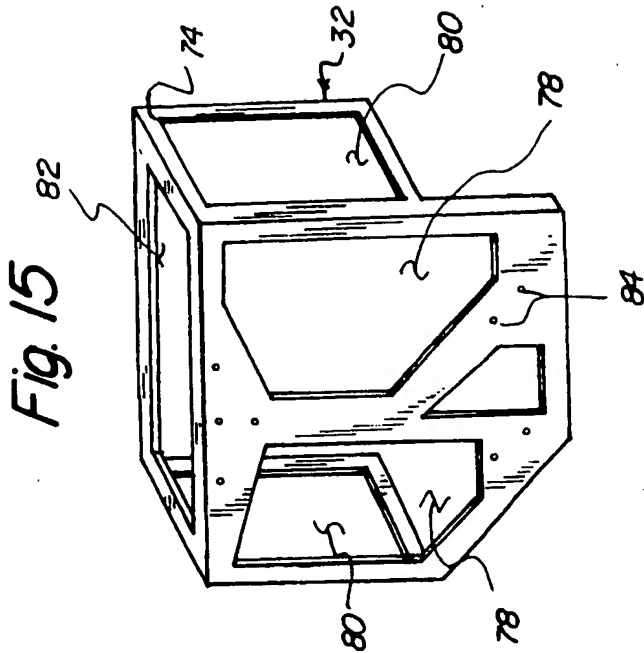


Fig. 12

Fig. 13





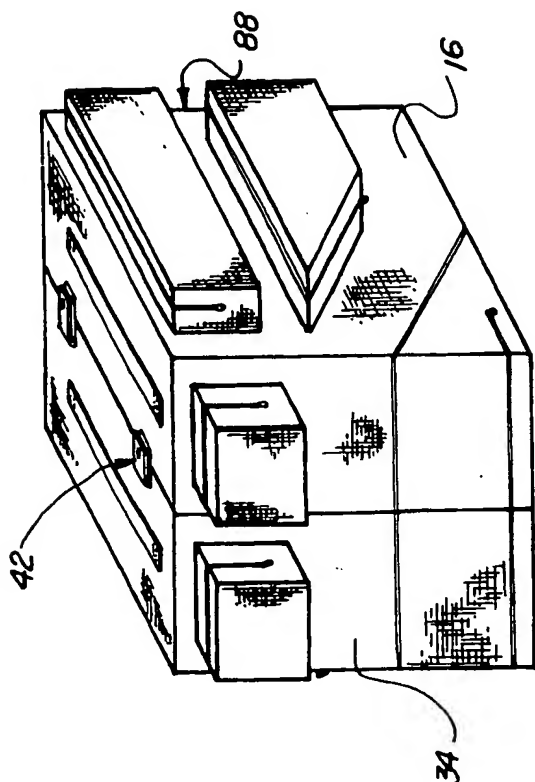


Fig. 18

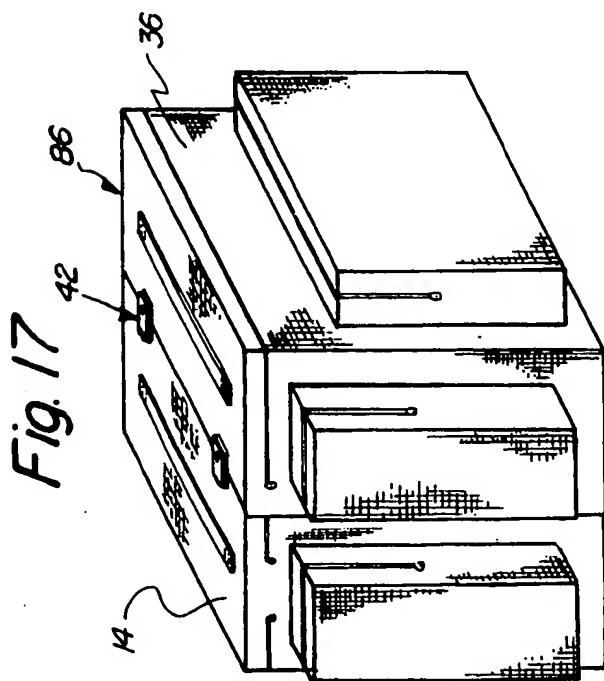


Fig. 17

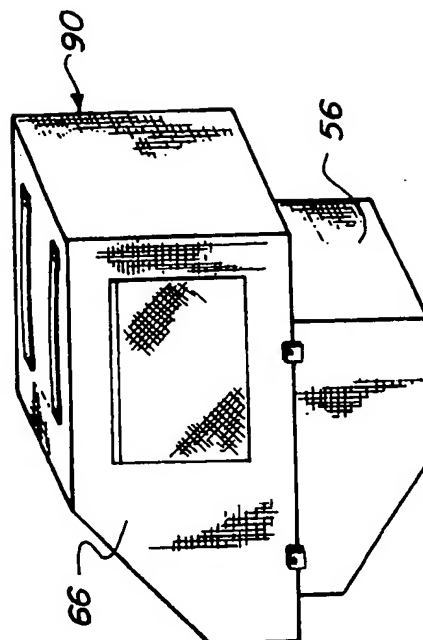


Fig. 19

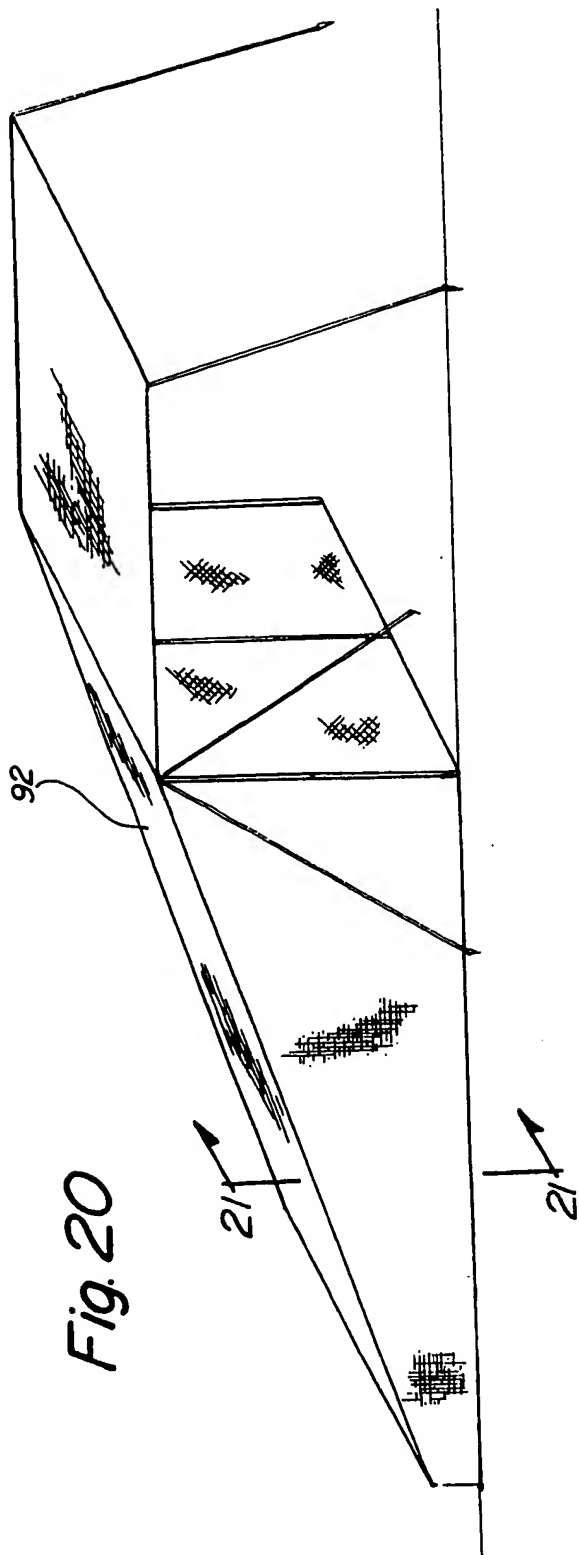


Fig. 21

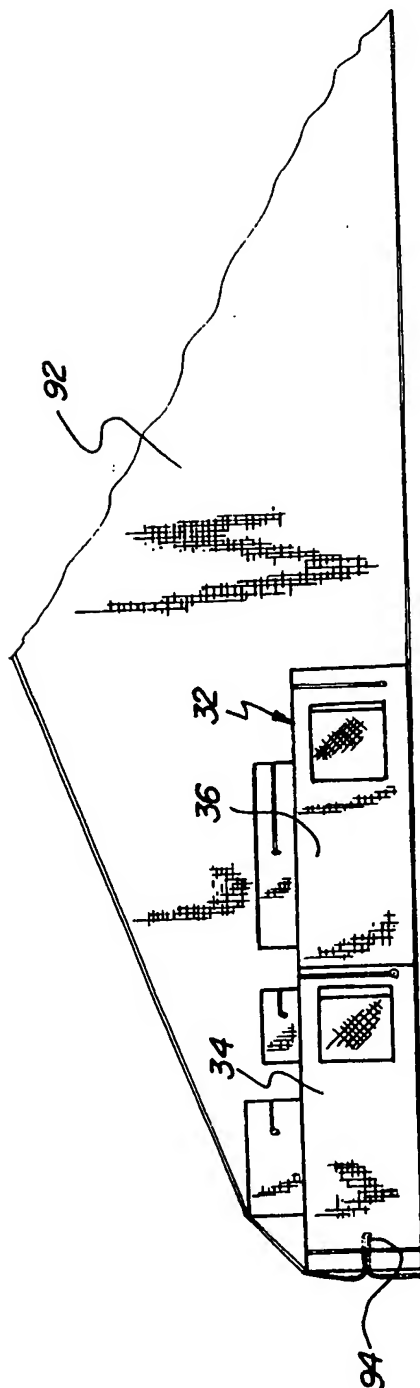


Fig. 22

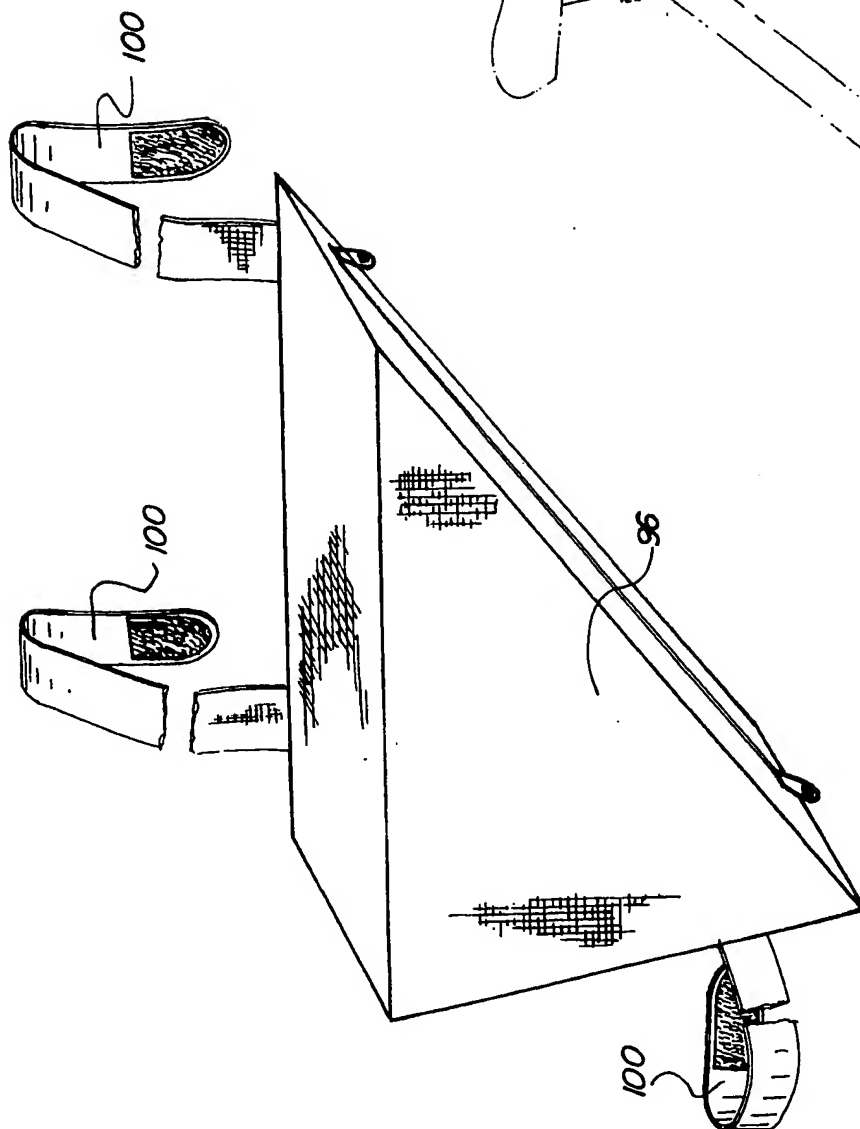
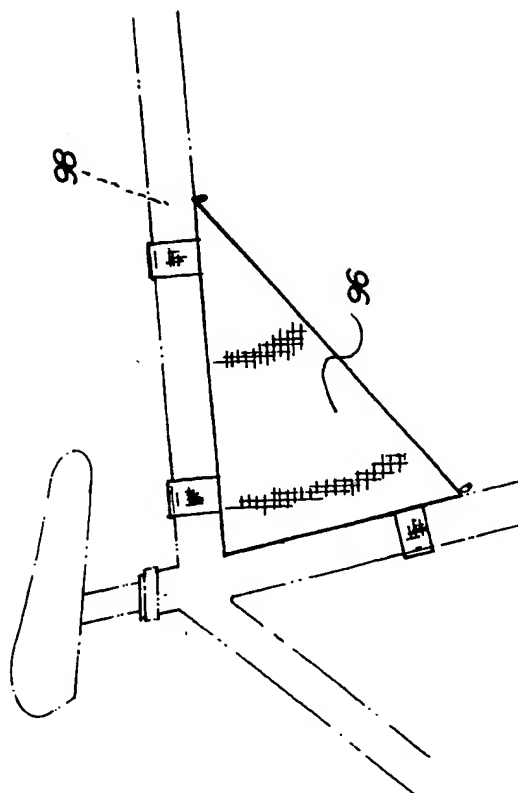


Fig. 23



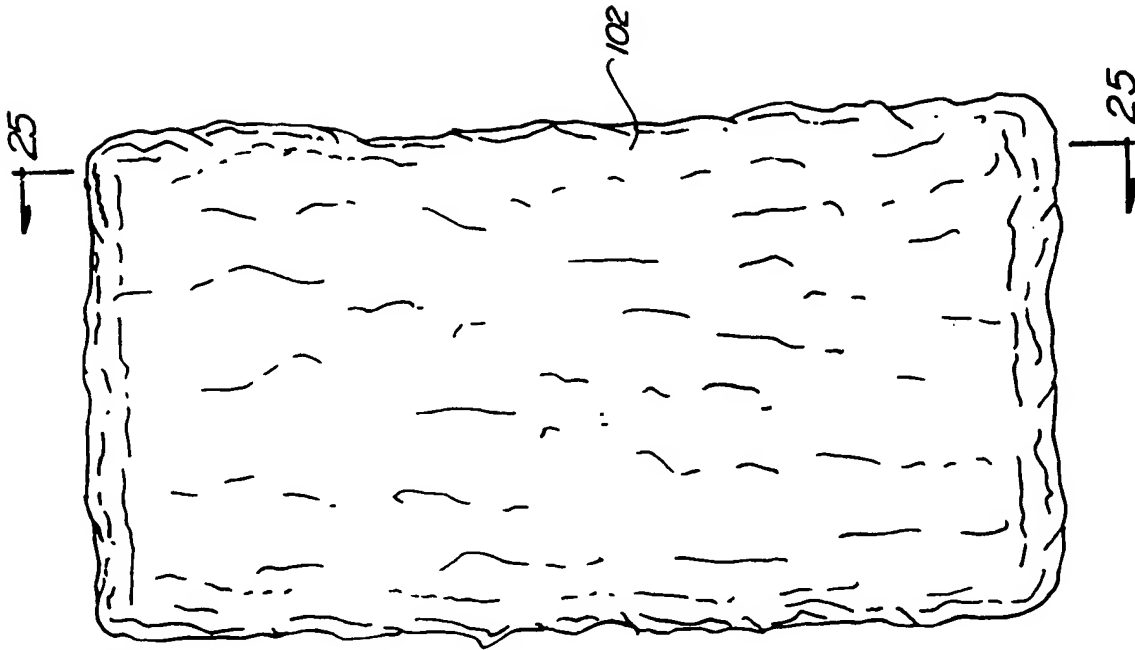


Fig. 24

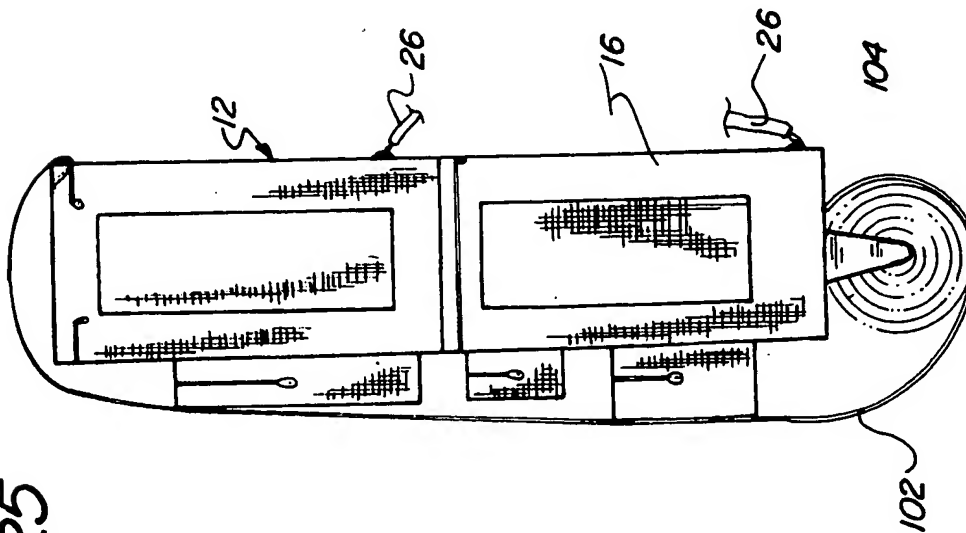


Fig. 25

Fig. 26

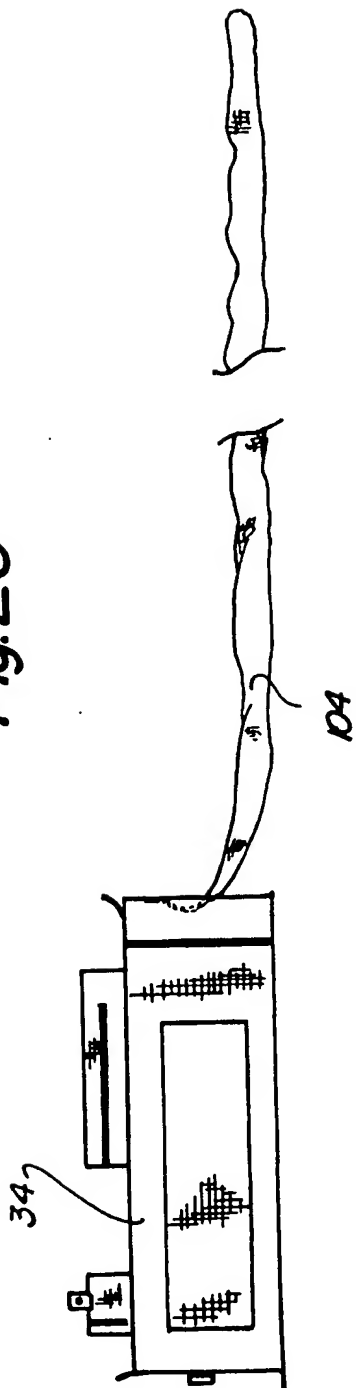
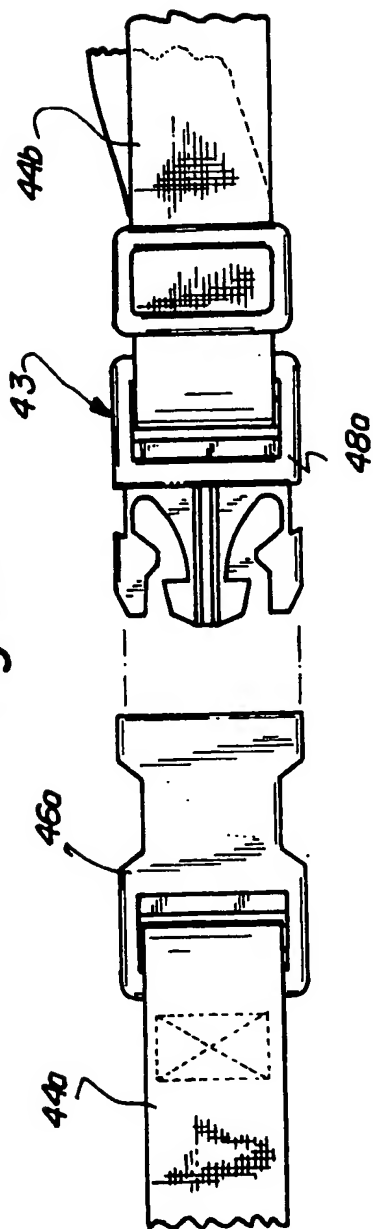


Fig. 27



MODULAR BACKPACK PANNIER LUGGAGE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to article carriers and more particularly pertains to a set of modular backpack panniers which may be reconfigured into luggage for carrying articles.

2. Description of the Prior Art

The use of article carriers is known in the prior art. More specifically, article carriers heretofore devised and utilized for the purpose of carrying articles upon the back of a user are known to consist basically of familiar, expected and obvious structural configurations, notwithstanding the myriad of designs encompassed by the crowded prior art which have been developed for the fulfillment of countless objectives and requirements.

For example, a combination pack frame, cot and tent is illustrated in U.S. Pat. No. 4,234,005 which comprises two principal parts, the first being a pack frame which is to be secured to a persons back, and the second being the lightweight tubular folding structure which forms the cot and the remainder of the tent support.

Another patent of interest is U.S. Pat. No. 3,822,813 which teaches a back pack frame for supporting a tent. The device includes a pair of spaced parallel L-shaped frame members which may be secured to an upright support member, such as a tree, whereby the frame members extend orthogonally from the tree and parallel to a ground surface to support a tent structure therebetween.

Other know prior art article carriers include U.S. Pat. No. 4,883,206; U.S. Pat. No. 4,035,855; and U.S. Pat. No. 4,526,307.

While these devices fulfill their respective, particular objectives and requirements, the aforementioned patents do not disclose a set of back pack panniers which may be reconfigured into luggage for carrying articles that includes first and second backpacks each of which may be separated into upper and lower compartments, with the lower compartments being couplable together to form a transportable piece of luggage, and the upper compartments being similarly couplable together to form a further piece of luggage. Furthermore, none of the known prior art article carriers teach or suggest a set of modular back pack pannier luggage assembly of the aforementioned structure which further includes a tent extendable from the back pack, as well as an extensible elastic pack cover for protecting the backpack from rain or the like.

In these respects, the modular backpack pannier luggage according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides an apparatus primarily developed for the purpose of carrying articles within mountain bike panniers which may be reconfigured into back packs or luggage.

SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of article carriers now present in the prior art, the present invention provides a new modular backpack pannier luggage construction wherein the same can be utilized for carrying articles upon a mountain bike or the back of an individual. As such, the general purpose of the present invention, which will be described subsequently in

greater detail, is to provide a new modular backpack pannier luggage apparatus and method which has many of the advantages of the article carriers mentioned heretofore and many novel features that result in modular backpack pannier luggage which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art article carriers, either alone or in any combination thereof.

To attain this, the present invention generally comprises a modular backpack which may be reconfigured into luggage for carrying articles. The assembly includes first and second backpacks each of which may be separated into upper and lower compartments. The lower compartments may then be coupled together to form a transportable piece of luggage, and the upper compartments are similarly couplable to form a further piece of luggage. The assembly also includes a tent extendable from the backpack, as well as an extensible elastic pack cover for protecting the backpack from rain or the like.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are, of course, additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

It is therefore an object of the present invention to provide a new set of modular backpack pannier luggage which has many of the advantages of the article carriers mentioned heretofore and many novel features that result in a modular backpack pannier luggage which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art article carriers, either alone or in any combination thereof.

It is another object of the present invention to provide a new set of modular backpack pannier luggage which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new set of modular backpack pannier luggage which is of a durable and reliable construction.

An even further object of the present invention is to provide a new set of modular backpack pannier luggage which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such modular backpack pannier luggage economically available to the buying public.

Still yet another object of the present invention is to provide a new set of modular backpack pannier luggage which provides in the apparatuses and methods of the prior art some of the advantages thereof, while simultaneously overcoming some of the disadvantages normally associated therewith.

Still another object of the present invention is to provide a new set of modular backpack panniers which may be reconfigured into luggage for carrying articles.

Yet another object of the present invention is to provide a new modular backpack pannier luggage assembly, which includes first and second panniers or backpacks, each of which may be separated into upper and lower compartments, with the lower compartments being couplable together to form a transportable piece of luggage, and the upper compartments being similarly couplable to form a further piece of luggage.

Even still another object of the present invention is to provide a new set of modular backpack pannier luggage assembly which includes a tent extendable from the backpack, as well as an extensible elastic pack cover for protecting the backpack from rain or the like.

These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 is a rear isometric view of a first backpack comprising a portion of the present invention.

FIG. 2 is a front isometric view of the first backpack.

FIG. 3 is a rear isometric view of a second lower bag comprising a portion of a second backpack.

FIG. 4 is a rear isometric view of a second upper bag of the second backpack.

FIG. 5 is a rear isometric view of a first lower bag of the first backpack.

FIG. 6 is a side elevation view of the fastening means of the present invention.

FIG. 7 is a top plan view of the fastening means as viewed from line 7—7 of FIG. 6.

FIG. 8 is a rear isometric view of a first upper bag of the first backpack.

FIG. 9 is a side elevational view of the first upper bag.

FIG. 10 is an isometric illustration of a first additional pannier bag.

FIG. 11 is an isometric illustration of a first additional extension bag coupled to the first additional pannier bag.

FIG. 12 is an isometric illustration of a second additional pannier bag.

FIG. 13 is an isometric illustration of a second additional pannier bag extension coupled to the second additional pannier bag.

FIG. 14 is a front isometric view of a first lower bag space frame of the first pannier backpack. FIG. 15 is a front isometric view of a second lower bag space frame of the second pannier backpack. FIG. 16 is a front isometric view of an upper pannier bag space frame. FIG. 17 is an isometric illustration of an upper pannier bag luggage assembly. FIG. 18 is an isometric illustration of a lower pannier bag luggage assembly. FIG. 19 is an isometric illustration of an additional pannier bag luggage assembly. FIG. 20 is an isometric view of a tent assembly comprising a portion of the present invention. FIG. 21 is a cross sectional view taken along line 21—21 of FIG. 20. FIG. 22 is an isometric view of a bicycle pack comprising a portion of the present invention. FIG. 23 is a side elevational view of the bicycle pack. FIG. 24 is a rear elevational view of an elastic pack cover extending over the first backpack. FIG. 25 is a cross-sectional view taken along line 25—25 of FIG. 24. FIG. 26 is a side elevation view of the second lower bag including sleeping bag structure. FIG. 27 is a plan view of an alternative fastening means of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to FIGS. 1—27 thereof, a set of new modular backpack pannier luggage assembly embodying the principles and concepts of the present invention and generally designated by the reference numeral will be described.

More specifically, it will be noted that the modular backpack pannier luggage 10 comprises a first backpack 12 having a first upper bag 14 removably coupled to a first lower bag 16, as best illustrated in FIGS. 1 and 2. The first upper bag 14 is substantially rectangular in shape and is removably coupled to a top end of the first lower bag 16. The first upper bag 14 is provided with a plurality of upper bag auxiliary compartments 18 having zippered openings which allow for storage of articles therewithin. In addition the first upper bag 14 further includes an upper bag mesh pocket 20 coupled to a side of the first upper bag for retaining small articles in an easily accessible manner, as well as retaining damp or wet articles for drying. Similarly, the first lower bag 16 includes a plurality of lower bag auxiliary compartments 22, including a waist pack compartment 24 removably coupled to a rear of the first lower bag, as illustrated in FIG. 1. The waist pack compartment 24 operable to be removed from the first lower bag 16, whereby it may be attached to an individual in a manner similar to that of a conventionally known belt by encompassing the waist of the individual. As illustrated in FIG. 2, the waist pack compartment 24 is further operable to be attached to a front of the first lower bag 16, whereby it engages the lower back of the individual carrying the first backpack pannier to provide lumbar support to the individual, when the backpack pannier 12 is positioned upon a back of the individual. To this end, a pair of shoulder straps 26 are removably attached to the first backpack pannier 2 and cooperate to retain the backpack pannier upon the back of the individual. To facilitate the transportation of tent poles, a pair of pole pockets 28 extend

along opposed edges of the front face of the first upper bag 14 and the first lower bag 16 and are further colinearly arranged such that a tent pole or the like positioned within each of the pole pockets 18 rigidifies the removable coupling between the first upper bag and the first lower bag. Lastly, the first lower bag 16 is provided with a corner compartment 30 which is removably attached by a corner compartment zipper.

The modular back pack pannier luggage assembly 10 of the present invention further comprises a second backpack pannier 32 of substantially similar configuration relative to the first backpack pannier 12, as illustrated in FIGS. 3 and 4. Thus, it can be seen from these figures that the second backpack pannier 32 comprises a second lower bag 34 having lower bag auxiliary compartments 22 of substantially similar configuration relative to the lower bag auxiliary compartments of the first lower bag 16, including a waist pack compartment 24 which may be attached around the waist of an individual or, alternatively, utilized as a lumbar supporting device. The second lower bag similarly includes a corner compartment 30 attached by a corner compartment zipper. Thus, the corner compartments 30 of the first lower bag 16 and the second lower bag 34 may be decoupled from the respective lower bags and coupled together to form a substantially rectangular duffle bag.

The second back pack pannier 32 also includes a second upper bag 36 of substantially similar construction relative to the first upper bag 14, including the upper bag auxiliary compartments 18 and the upper bag mesh pocket 20. However, as can be readily ascertained from the drawings, the upper bags 14, 36 are constructed as mirror images of one another. Similarly, the lower bags 16, 34 are also constructed as mirror images of one another. In other words, the location of the auxiliary compartments 18, 22 of the respective upper bags 14, 36 and lower bags 16, 34 are oppositely positioned relative to one another. However, such opposite positioning or mirror image construction of the first back pack pannier 12 relative to the second back pack pannier 32 is not essential to the invention, although such construction is preferable for reasons which will henceforth be described.

FIG. 5 illustrates the first lower bag 16 of the first back pack pannier 12 as further including a pole compartment 40 which may be utilized to store additional tent poles. The pole compartment 40 is equipped with removable fasteners, such as velcro or the like, which allow it to be removably coupled to either of the back packs 12, 32 as illustrated in FIG. 5 in a horizontal position, or in an unillustrated vertical position as well.

FIG. 6 and 7 illustrate the fastening means 42 utilized to removably couple components of the back packs 12, 32 together, and can be seen from these figures that the fastening means comprises a strap 44 having a female snap fastener 46 which removably engages a male snap fastener 48 to couple the components together, such as the first upper bag 14 to the first lower bag 16 as illustrated in FIG. 2, for example. Although snap fasteners 46, 48 have been illustrated as the preferred fastening means, it is contemplated that other conventionally known fasteners may be utilized as well, such as zippers, buttons, clips, threaded members, rotatably engaged coupling members, or the like. Thus, the use of snap fasteners 46, 48 is the preferred fastening means 42, but should not be regarded as limiting thereto. In this respect, an alternative fastening means 43 is illustrated in FIG. 27 of the drawings, including a strap 44a having a female fastener 46a which removably engages a male fastener 48a coupled to a further strap 44b.

FIGS. 8 and 9 illustrate the first upper bag 14 of the first back pack pannier 12 and it can be seen from these figures

that the first upper bag includes a plurality of zippers to permit access to an interior of the bag as well as into the upper bag auxiliary compartments 18. Excluding the zippers of the upper bag auxiliary compartments 18, the zippers of the upper bag 14 include a lid zipper 50 and a rear zipper 52, thereby providing multiple paths of entry into the interior of the upper bag 14. In addition, it should be realized that all of the bags 14, 16, as well as 34, 36 are provided with lid zippers 50 permitting access into the interiors thereof. Also, a handle 54 is provided for each of the bags 14, 16 and 34, 36. Thus, the bags 14, 16 and 34, 36 may be easily toted, either individually or coupled together.

Turning now to FIGS. 10 and 11, it can be shown that the present invention 10 further comprises a first additional pannier bag 56 provided with fastening means 42 which permit the first additional pannier bag to be removably coupled to any of the first or second bags 14, 16 and 34, 36, such as to a top surface of the first upper bag 14 or a lower surface of the first lower bag 16, for example. The first additional pannier bag 56 is provided with a pair of flashlight straps 58 for retaining a flashlight thereto and is further provided with at least one first additional pannier bag mesh pocket 60. In addition, a zipper 62 allows a first additional extension bag 64 to be removably coupled to the first additional pannier bag 56, as illustrated in FIG. 11. Also, handles 54 are provided on both the first additional pannier bag 56 and the first additional extension bag 64.

Similar in construction to the first additional pannier bag 56, but yet slightly larger in size, is a second additional pannier bag 66 illustrated in FIGS. 12 and 13 of the drawings. The second additional pannier bag 66 is similarly equipped with retaining means 42 which allow it to be coupled to any of the first and second bags 14, 16 and 34, 36 in a manner similar to that of the first additional pannier bag 56. Also, a second additional pannier bag zipper 68 allows a second additional extension bag 70 to be removably coupled to the second additional pannier bag 66.

Turning now to FIGS. 14 through 16, it can be shown that each of the first and second bags 14, 16 and 34, 36 includes an internal frame which provides rigidity and support to the organization. To this end, a first lower bag space frame 72 is illustrated in FIG. 14 for the first lower bag 16 of the first back pack pannier 12, a second lower bag space frame 74 is illustrated in FIG. 15 for the second lower bag 34 of the second back pack pannier 32, and an upper bag space frame 76 is illustrated in FIG. 16 for either of the upper bags 14, 36. Each of the space frames 72-76 is provided with a plurality of apertures therethrough, with each of the apertures providing a specific feature to the invention 10. The shoulder apertures 78 allow for a slight projection of the posterior shoulder bone into the bags, thereby providing comfort to the wearer of the device 10 when the bags 14, 16 and 34, 36 are worn upon the back, either singularly or together as the first and second back packs 12, 32. To this end, the shoulder straps 26, although illustrated in FIG. 2 as being attached to the first back pack pannier 12, may be attached to any of the individual bags 14, 16 and 34, 36. Referring back now to FIG. 14-16, the sidewall apertures 80 allow the auxiliary compartments 18, 22 to be constructed so as to permit communication between the interior of the auxiliary compartments and the interior of each of the bags 14, 16 and 34, 36. Finally, the top apertures 82 permit access through the lids into the interior of each of the bags 14, 16 and 34, 36. In addition, each of the space frames 72-76 is provided with a plurality of screw holes 84 which permit the attachment of the first and/or second back packs 12, 32 to a conventional unillustrated mountain bike rack system or alternatively, an unillustrated back pack frame, if so desired.

Referring now to FIGS. 17 through 19, it can be shown that the bags 14, 16 and 34, 36, as well as 56, 66 may be coupled together in pairs to form luggage assemblies. To this end, the first and second upper bags 14, 36 may be coupled together via the fastening means 42 to form an upper bag luggage assembly 86. Similarly, the first lower bag 16 and the second lower bag 34 may be coupled together to form a lower bag luggage assembly 88, and the first additional pannier bag 56 and second additional pannier bag 66 coupled together to form an additional pannier bag luggage assembly 90. Thus, the back packs 12, 32, as well as the additional pannier bags 56, 66, may be coupled together to form three unitary pieces of luggage 86-90 which may be checked as baggage on an airplane flight or the like, thereby decreasing the overall number of items checked.

Continuing on to FIGS. 20 and 21, a tent assembly 92 removably stowed within a tent pocket 94 of either of the lower bags 16, 34 may be provided. The tent assembly 92, as illustrated in these figures, is substantially wedge shaped and utilizes the associated back pack pannier 12 or 32 to anchor an end thereof, with the aforementioned tent poles supporting another end thereof.

FIGS. 22 and 23 illustrate a possible configuration for any one of the auxiliary compartments 18-22. Thus, it can be seen that the bicycle pack 96 illustrated in these figures is adapted to be removably attached to a bicycle 98 through a plurality of velcro attached bicycle pack straps 100. As such, the bicycle pack straps 100 may be utilized to join the bicycle pack 96 to either of the back packs 12, 32 or the additional pannier bags 56, 66. In addition, the bicycle may be provided with the fastening means 42 to provide for coupling to the bags 14, 16, 34, 36, 56, or 66.

FIGS. 24 and 25 illustrate an elastic pack cover 102 stored upon a removably attached reel 104 beneath either of the lower bags 16, 34. The elastic pack cover 102 is configured to be unrolled from the reel 104 and extended about the back pack pannier 12 to substantially protect the back pack pannier from rain and the like. Additionally or alternatively, the elastic pack cover 102 may be configured as a poncho by simply providing the pack cover with a head opening which allows a wearer of the back pack pannier 12 to extend the elastic pack cover over the backpack pannier as well as himself to position the individuals head through the head opening, whereby the pack cover is draped over both the back pack pannier and the individual.

Lastly, FIG. 26 illustrates that a sleeping bag structure 104 can be removably stowed within a sleeping bag compartment within any of the panniers bags, and preferably within the second lower bag 34, as illustrated.

As to a further discussion of the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact

construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as being new and desired to be protected by LETTERS PATENT of the United States is as follows:

1. Modular back pack pannier luggage comprising:
 - a first back pack pannier having a first upper bag removably coupled to top end of a first lower bag;
 - first retaining means for retaining said back pack pannier upon a back of a first individual; and,
 - a second back pack pannier having a second upper bag removably coupled to a top end of a second lower bag; and second retaining means for retaining said back pack pannier upon a back of a second individual, wherein said first and second upper bags are couplable together to form an upper bag luggage assembly, and said first lower bag and said second lower bag are couplable together to form a lower bag luggage assembly.
2. The new modular back pack pannier as recited in claim 1, wherein said bags each comprise a frame means for rigidifying said bag.
3. The new modular back pack pannier as recited in claim 2, wherein said frame means comprises a space frame having a pair of shoulder apertures which allow for a slight projection of a posterior shoulder bone of said individual into said bags, thereby providing comfort to a wearer of said back pack pannier.
4. The new modular back pack pannier as recited in claim 3, wherein said retaining means comprises a pair of shoulder straps.
5. The new modular back pack pannier as recited in claim 4, and further comprising a first additional pannier bag removably coupled to said back pack pannier.
6. The new modular back pack pannier as recited in claim 5, and further comprising a second additional pannier bag removably coupled to said back pack pannier, wherein said additional pannier bags are couplable together to form additional pannier bag luggage.
7. The new modular back pack pannier as recited in claim 6, and further comprising a tent removably stored within said back pack pannier, said tent being extendable therefrom to be at least partially anchored to a ground surface by a weight of said back pack pannier.
8. The new modular back pack pannier as recited in claim 7, and further comprising an elastic pack cover stored upon a removably attached reel beneath said lower bag, said elastic pack cover being configured to be unrolled from said reel and extended about said back pack pannier to substantially protect said back pack pannier.
9. A new modular back pack pannier luggage comprising:
 - a first back pack pannier having a first upper bag removably coupled to a top end of a first lower bag, said first upper bag having a plurality of upper bag auxiliary compartments each having zippered openings which allow for storage of articles therewithin, said first upper bag further including an upper bag mesh pocket coupled to a side of said first upper bag for retaining small articles in an easily accessible manner and retaining damp articles for drying, said first lower bag having a plurality of lower bag auxiliary compartments with a waist pack compartment removably coupled to a rear of said first lower bag, said waist pack compartment being operable to be removed from said first lower bag, whereby it may be attached to an individual, said waist pack compartment further being operable to be attached to a front of said first lower bag, whereby it functions

to provide lumbar support, said first lower bag and said first upper bag having a pair of colinearly arranged pole pockets for retaining a tent pole therein for storage and to rigidifies said removable coupling between said first upper bag and said first lower bag;

first retaining means for retaining said back pack pannier upon a back of a first individual;

a second back pack pannier having a second upper bag removably coupled to a top end of a second lower bag, said second upper bag having a plurality of upper bag auxiliary compartments each having zippered openings which allow for storage of articles therewithin, said second upper bag further including an upper bag mesh pocket coupled to a side of said second upper bag for retaining small articles in an easily accessible manner and retaining damp articles for drying, said second lower bag having a plurality of lower bag auxiliary compartments with a waist pack compartment removably coupled to a rear of said second lower bag, said waist pack compartment being operable to be removed from said second lower bag, whereby it may be attached to an individual, said waist pack compartment further being operable to be attached to a front of said second lower bag, whereby it functions to provide lumbar support, said second lower bag and said second upper bag having a pair of colinearly arranged pole pockets for retaining a tent pole therein for storage and to rigidifies said removable coupling between said second upper bag and said second lower bag; and,

second retaining means for retaining said back pack pannier upon a back of a second individual, wherein said first and second upper bags are couplable together to form an upper bag luggage assembly, and said first lower bag and said second lower bag are couplable together to form a lower bag luggage assembly.

10. The new modular back pack pannier as recited in claim 9, wherein said bags each comprise a frame means for rigidifying said bag.

11. The new modular back pack pannier as recited in claim 9, wherein said frame means comprises a space frame having a pair of shoulder apertures which allow for a slight projection of a posterior shoulder bone of said individual into said bags, thereby providing comfort to a wearer of said back pack pannier.

12. The new modular back pack pannier as recited in claim 11, wherein said retaining means comprises a pair of shoulder straps.

13. The new modular back pack pannier as recited in claim 12, and further comprising a first additional pannier bag removably coupled to each of said back pack panniers.

14. The new modular back pack pannier as recited in claim 13, and further comprising a second additional pannier bag removably coupled to each of said back pack panniers, wherein said additional pannier bags are couplable together to form additional pannier bag luggage.

15. The new modular back pack pannier as recited in claim 14, and further comprising a tent removably stored within each of said back pack panniers, said tent being extendable therefrom to be at least partially anchored to a ground surface by a weight of each of said back pack panniers.

16. The new modular back pack pannier as recited in claim 15, and further comprising an elastic pack cover stored upon a removably attached reel beneath said second lower bag, said elastic pack cover being configured to be unrolled from said reel and extended about each of said back pack panniers to substantially protect each of said back panniers.

* * * * *

United States Patent [19] Punch

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[45] Date of Patent: Jun. 9, 1998

[54] VERSATILE AND ADJUSTABLE FOLDING
HUNTERS GROUND BLIND

[76] Inventor: **Timmy J. Punch**, 418 Garland Dr.
#203, Lake Jackson, Tex. 77566

[21] Appl. No.: 823,359

[22] Filed: Mar. 24, 1997

[51] Int. Cl.⁶ E04H 15/14

[52] U.S. Cl. 135/93; 135/117; 135/901;
135/115

[58] Field of Search 135/900, 901,
135/902, 117, 119, 151, 155, 115, 161,
91, 93, 94, 96, 127

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Primary Examiner—Lanna Mai

[57] ABSTRACT

A hunters ground blind including a frame portion. Further provided is cover system dimensioned for extending over the frame portion. Situated on the cover is a front window with a plurality of vertical strips and a penetrateable screen removably coupled thereover. Also included is a pair of inverted L-shaped slots formed in the cover system which are each adapted to allow the selective opening thereof when hunting various game.

2 Claims, 10 Drawing Sheets

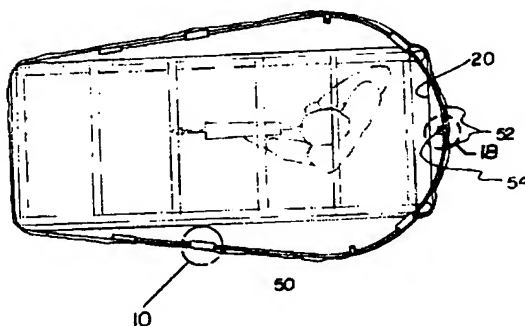
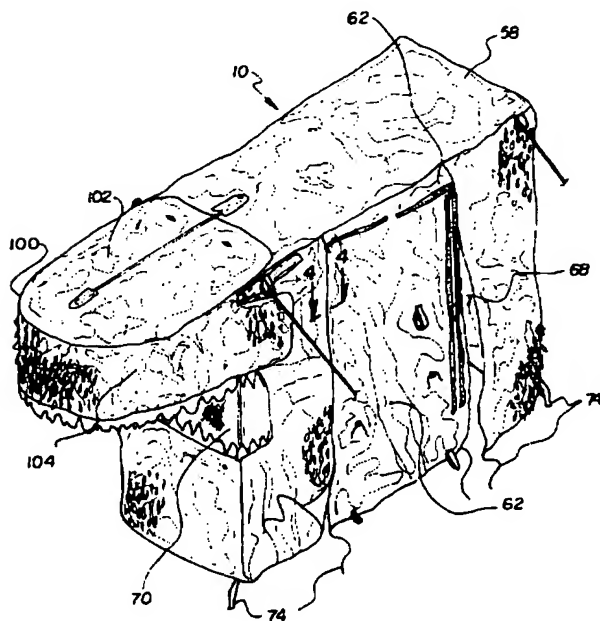


FIG. 2

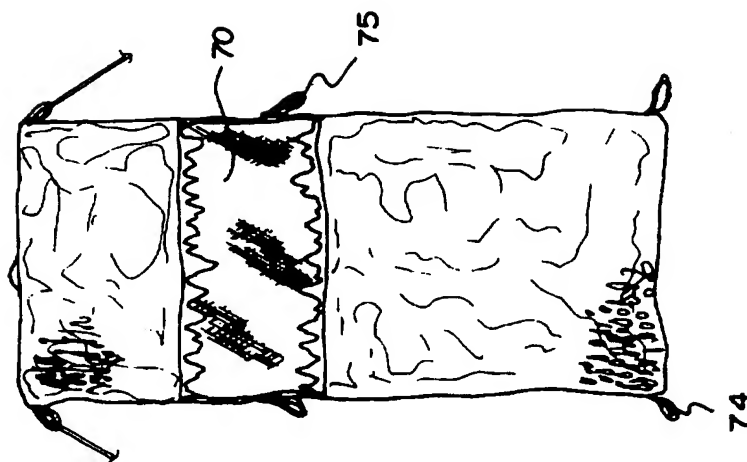


FIG. 1

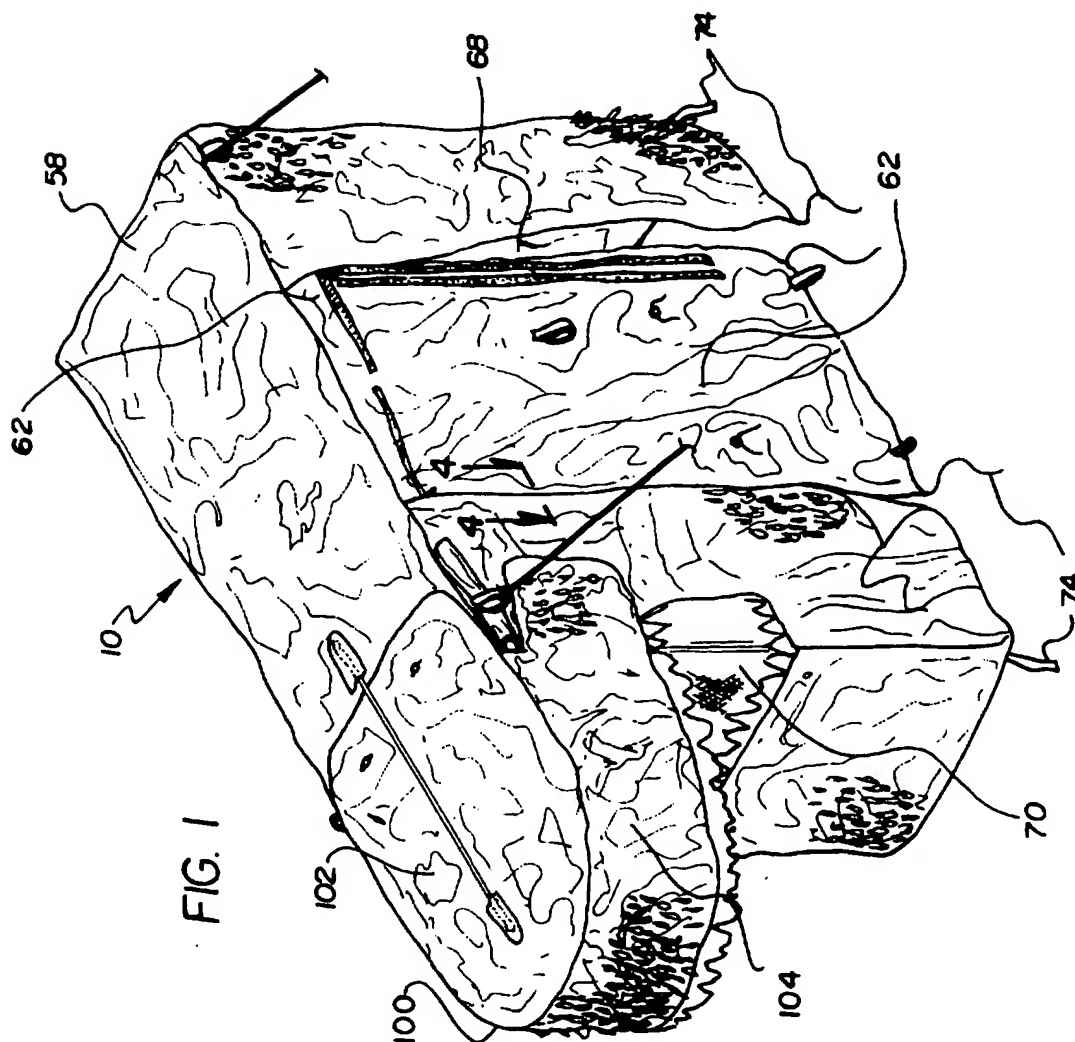


FIG. 3

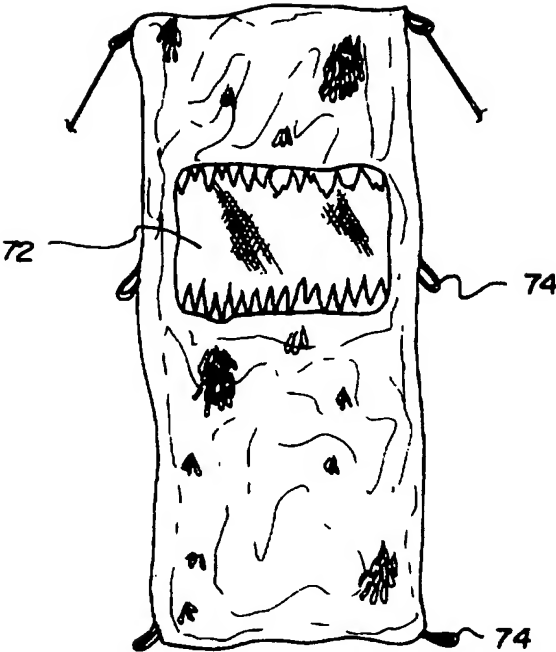


FIG. 4

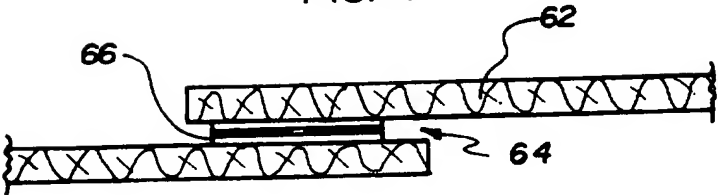


FIG. 5

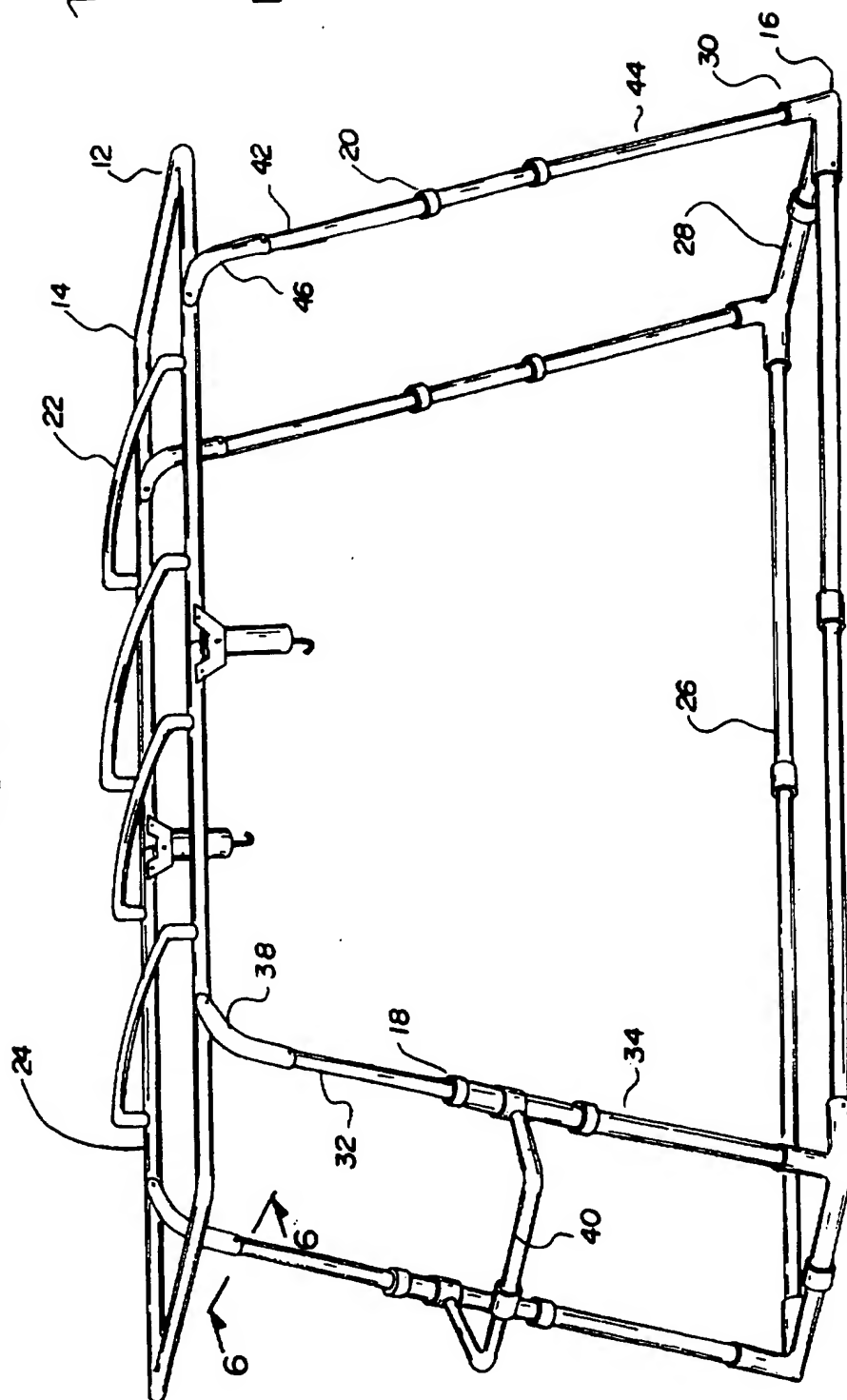


FIG. 6

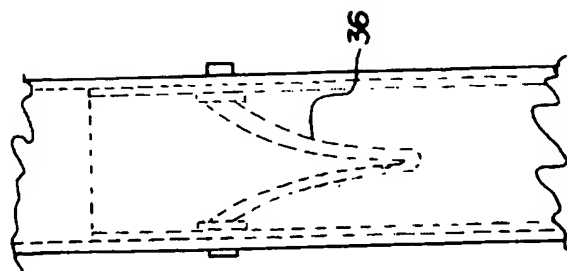


FIG. 7

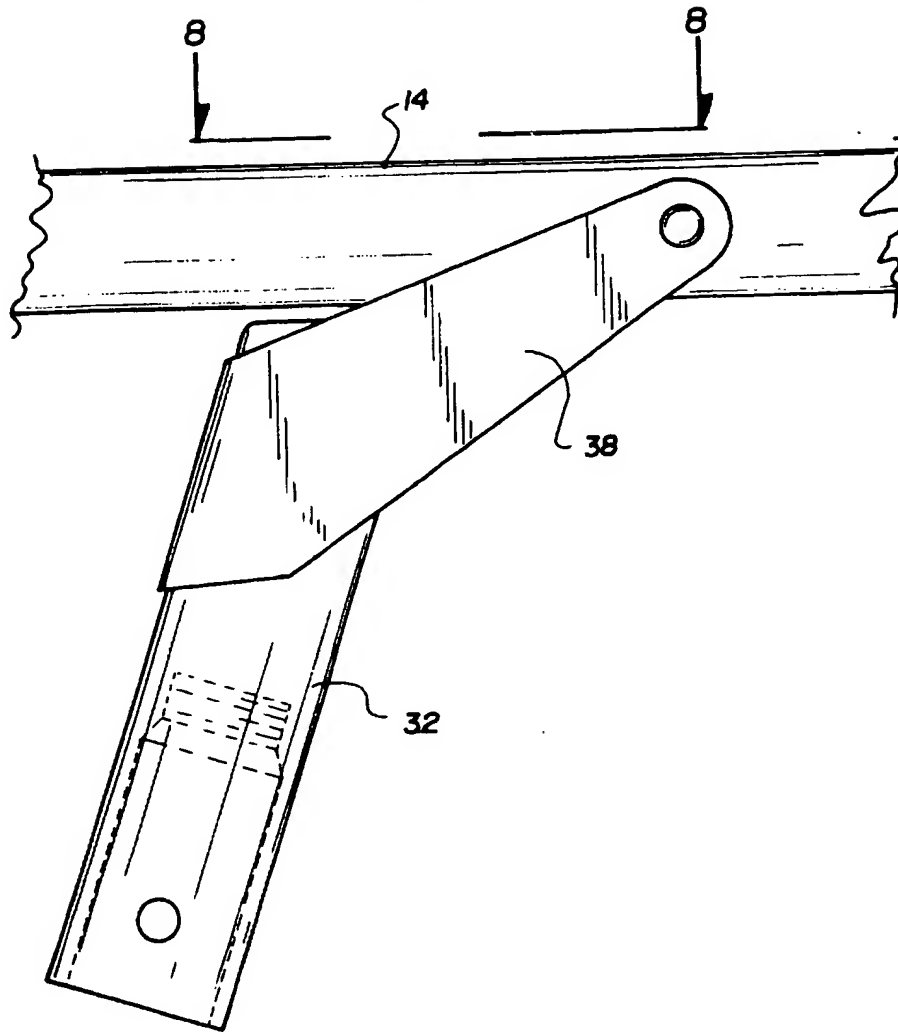


FIG. 8

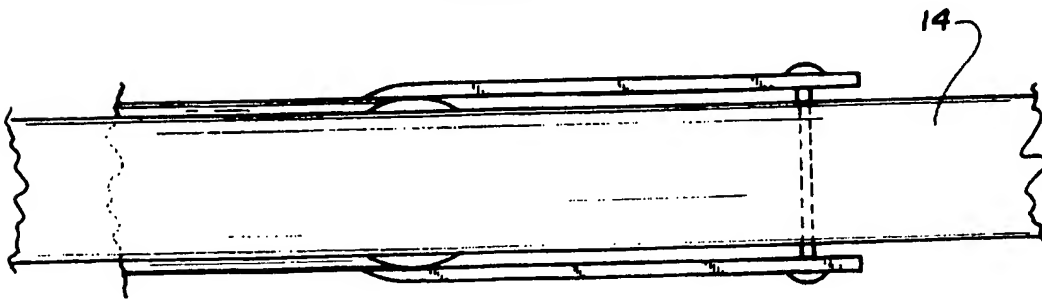
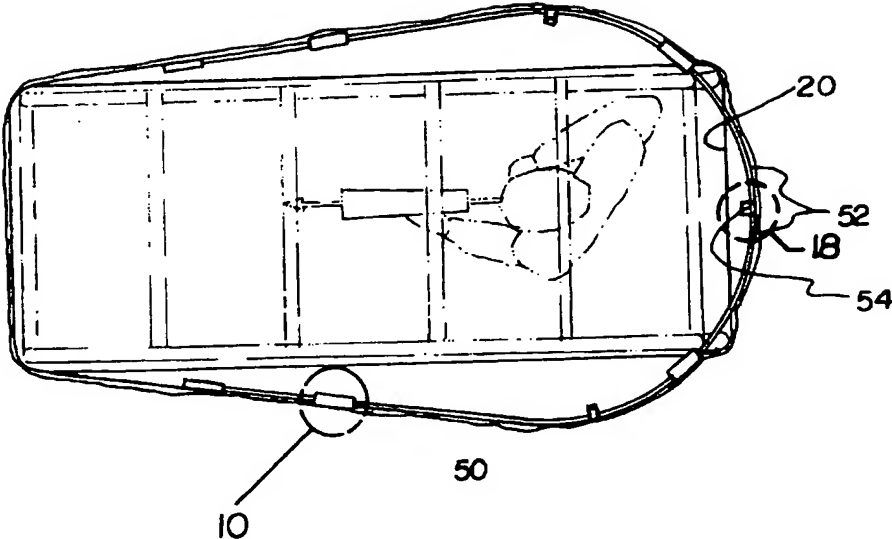
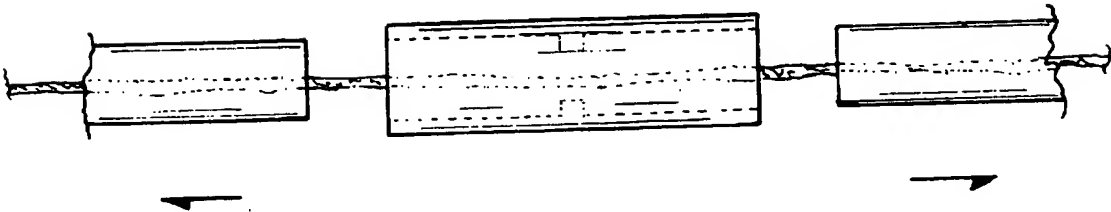


FIG. 9



52 53 FIG. 10



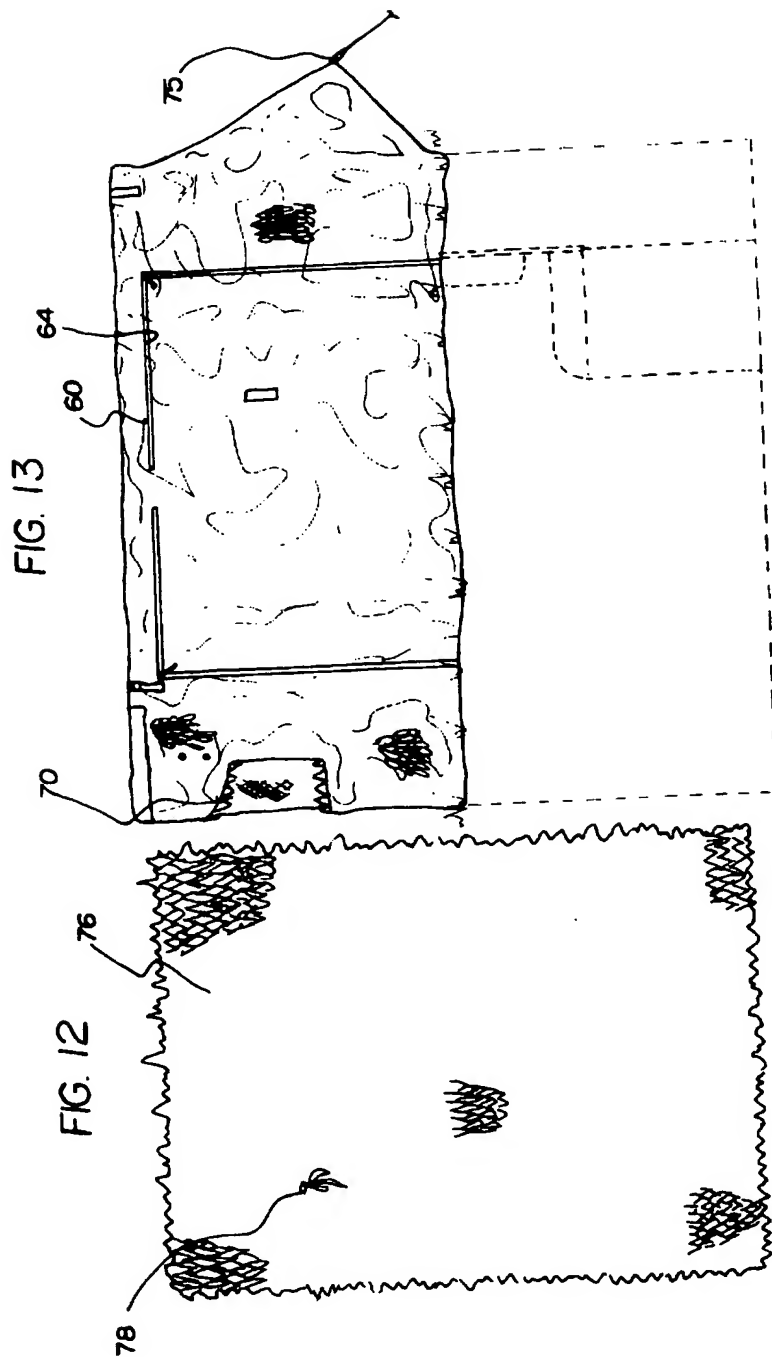
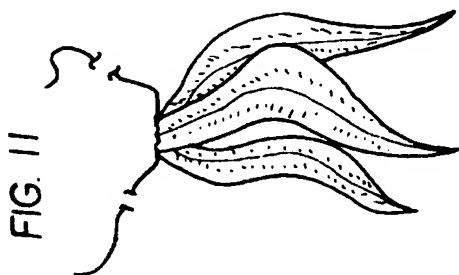


FIG. 14A

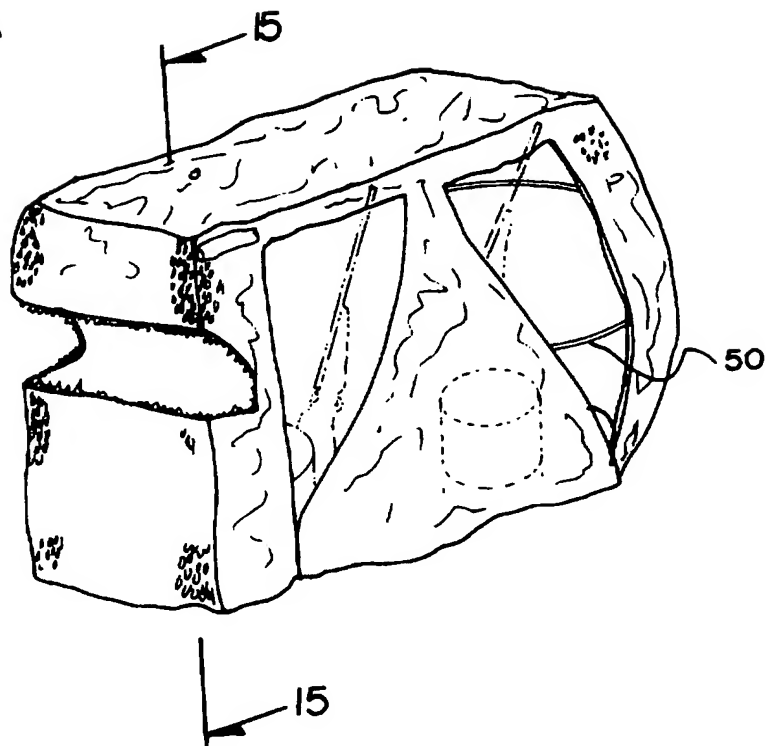


FIG. 14B

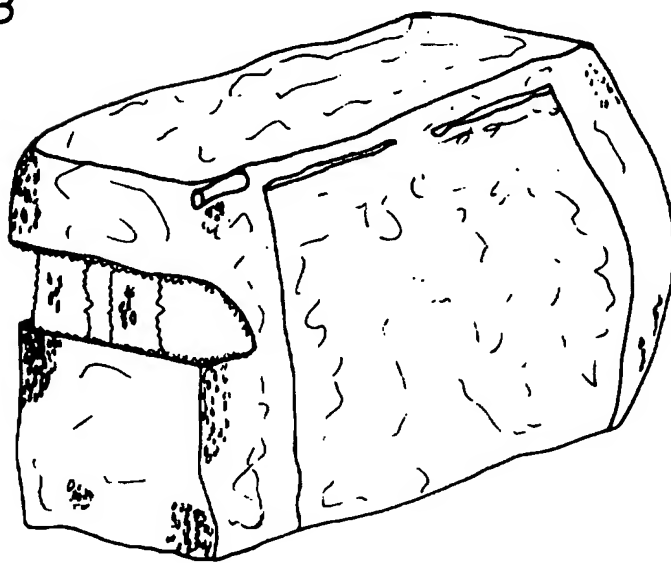


FIG. 14C

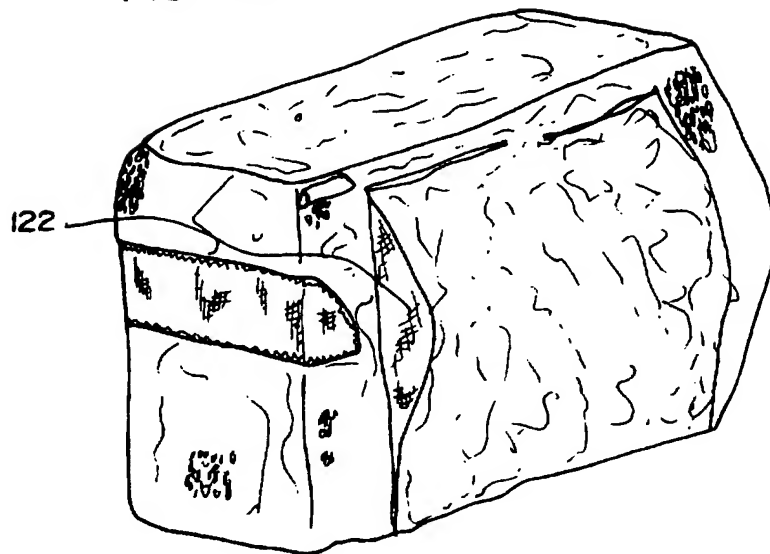


FIG. 15

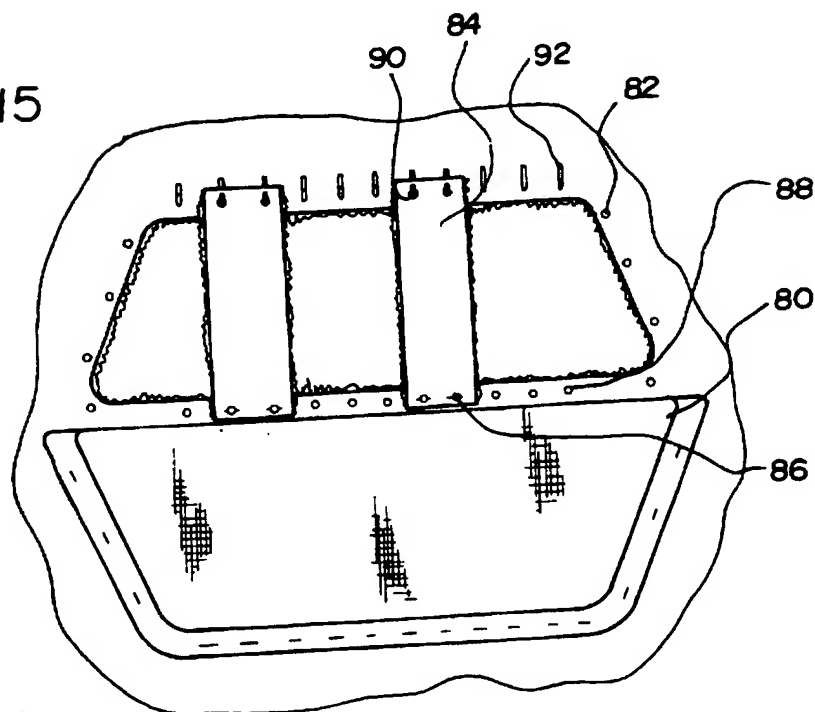


FIG. 16

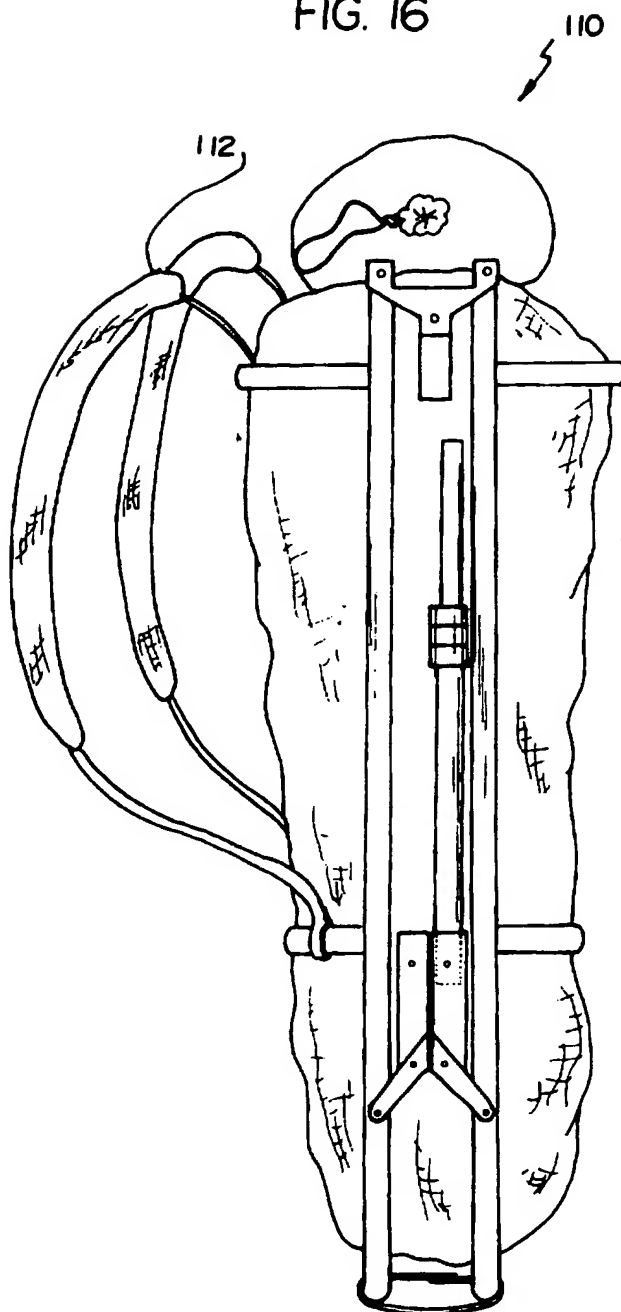


FIG. 17

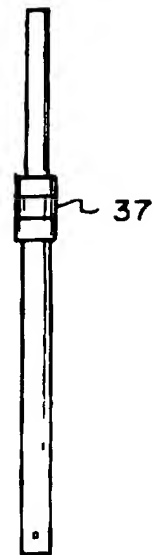


FIG. 18A

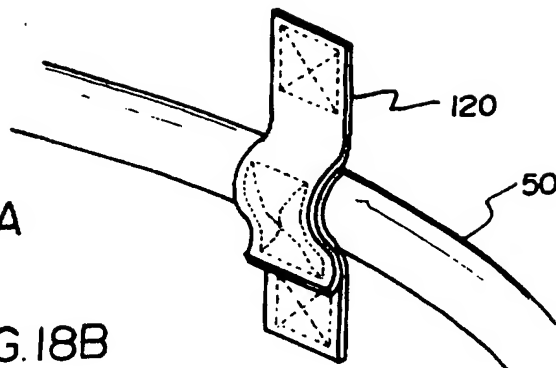


FIG. 18B

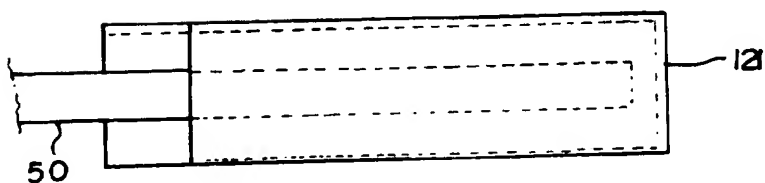
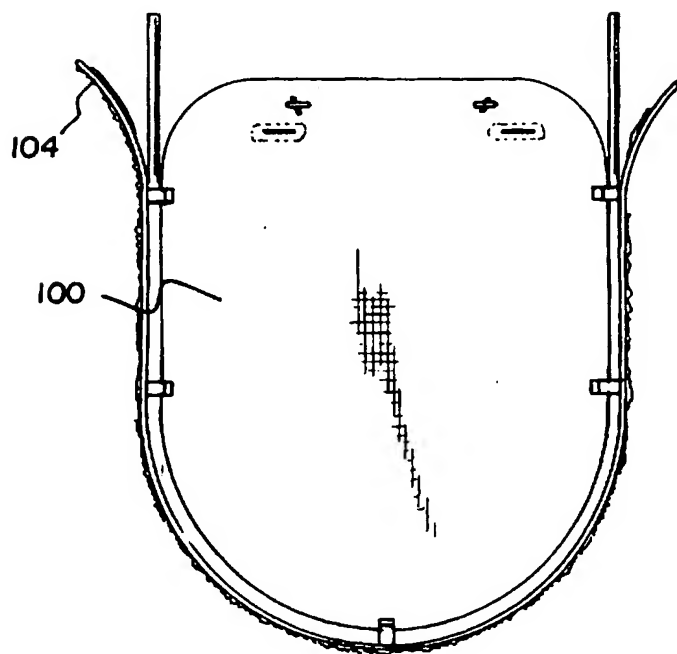


FIG. 19



VERSATILE AND ADJUSTABLE FOLDING HUNTERS GROUND BLIND

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a folding hunters ground blind and more particularly pertains to providing a blind which is adjustable thereby accommodating various types of hunting.

2. Description of the Prior Art

The use of portable blinds is known in the prior art. More specifically, portable blinds heretofore devised and utilized for the purpose of concealing an observer are known to consist basically of familiar, expected and obvious structural configurations, notwithstanding the myriad of designs encompassed by the crowded prior art which have been developed for the fulfillment of countless objectives and requirements.

By way of example, U.S. Pat. No. 5,377,711 to Mueller discloses a camouflage blind for hunters.

U.S. Pat. No. 5,062,234 to Green discloses a portable blind.

U.S. Pat. No. 4,798,019 to Sury et al. discloses a portable blind.

U.S. Pat. No. Des. 350,399 to Bodrie discloses the ornamental design for a hunting blind.

U.S. Pat. No. 4,723,371 to Williams discloses a self supported, collapsible, and portable walled structure suitable for use as a hunting blind.

U.S. Pat. No. 4,777,755 to Colburn discloses a portable hunting blind and shelter.

U.S. Pat. No. 4,186,507 to Stinnett discloses a portable duck blind.

In this respect, the folding hunters ground blind according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides an apparatus primarily developed for the purpose of providing a blind which is adjustable thereby accommodating various types of hunting.

Therefore, it can be appreciated that there exists a continuing need for a new and improved folding hunters ground blind which can be used for providing a blind which is adjustable thereby accommodating various types of hunting. Further, there is an evident need for a blind with features for improved concealment of a user. In this regard, the present invention substantially fulfills this need.

SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of portable blinds now present in the prior art, the present invention provides an improved folding hunters ground blind. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved folding hunters ground blind which has all the advantages of the prior art and none of the disadvantages.

To attain this, the present invention essentially comprises a folding frame portion including a top member, a bottom member, a front member, and a rear member. The top member has a generally rectangular shaped perimeter. A plurality of cross members extend between long supports of the perimeter. The bottom member has a generally rectangular shaped perimeter including telescoping long and short

supports. Corners of the bottom member have upwardly extending receiving tubes disposed thereon. The front member has upper members and lower members. The upper members are telescopically received within the lower members. The lower members are coupled with two of the upwardly extending receiving tubes of the bottom member. The upper members have a hinge member coupled to the top member. A U-shaped support extends between upper ends of the lower members of the front portion. The rear member has opposed upper members and lower members. The upper members of the rear member are telescopically coupled with the lower members of the rear member. The lower members of the rear member are coupled with two of the upwardly extending receiving tubes of the bottom member. The upper members of the rear member have a hinge member coupled to the top member. An adjustable arcuate support member is secured to the cover system in the front of, or around the rear member of the folding frame portion. Such arcuate member extends around a rear portion of the frame portion for providing more room within the blind for bow hunting and the like. A two-layer cover system is dimensioned for adjustably extending over the folding frame portion and the arcuate support member to form an enclosure. The cover system includes an interior layer fabricated of waterproof camouflage material. The interior layer includes a pair of door portions formed by inverted L-shaped vertical slots formed therethrough. The vertical slots have a pile type fastener strip and a zipper disposed thereon corresponding to a pile type fastener strip and a zipper on the pair of door portions for closure thereof. Preferably, the zipper is located on a top horizontal portion of the L-shaped slot and the pile fastener is located on a bottom vertical portion of the L-shaped slot. The slots may be selectively opened depending on what type of game is being hunted. The interior layer includes adjustable front, side and rear windows. The interior layer has adjustable tie down strips disposed on lower ends thereof. The cover system also includes an exterior layer comprised of three dimensional camouflage panels securable to the interior layer. The exterior layer further includes attachable vegetation. The front window is equipped with a versatile front window which has a quietly or near-silent removable screen selectively situated thereover, whereby the screen is adapted to be penetrated by a weapon during use while also allowing comfortable hunting in "insect-infested" forest areas. Such front window is equipped with a plurality of vertical strips removably coupled thereover. The frame further has a removable awning with a semicircular configuration situated above the front window to help preclude light from entering the blind while offering a "tree-like" shape to the blind.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are, of course, additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

It is therefore an object of the present invention to provide a new and improved folding hunters ground blind which has all the advantages of the prior art portable blinds and none of the disadvantages.

It is another object of the present invention to provide a new and improved folding hunters ground blind which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a versatile folding hunters ground blind which is of a durable and reliable construction.

An even further object of the present invention is to provide a new and improved folding hunters ground blind which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such folding hunters ground blind economically available to the buying public.

Still yet another object of the present invention is to provide a new and improved folding hunters ground blind which provides in the apparatuses and methods of the prior art some of the advantages thereof, while simultaneously overcoming some of the disadvantages normally associated therewith.

Still another object of the present invention is to provide a blind which is adjustable thereby accommodating various types of hunting, ice fishing, observing wildlife, and photographing wildlife.

Another object of the present invention is to provide a blind which may be maneuvered and adjusted in a quiet manner.

Lastly, it is an object of the present invention to provide a new and improved hunters ground blind including a frame portion. Further provided is cover system dimensioned for extending over the frame portion. Situated on the cover is a front window with a plurality of vertical strips and a penetrateable screen removably coupled thereover. Also included is a pair of inverted L-shaped slots formed in the cover system which are each adapted to allow the selective opening thereof when hunting various game.

These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 is a perspective view of the first embodiment of the folding hunters ground blind constructed in accordance with the principles of the present invention.

FIG. 2 is a front elevation view of the present invention with the cover in place depicting the front window thereof.

FIG. 3 is a rear elevation view of the present invention with the cover in place depicting the rear window thereof.

FIG. 4 is a cross-sectional view as taken along line 4—4 of FIG. 1.

FIG. 5 is a perspective view of the foldable frame of the present invention in an erected orientation.

FIG. 6 is a cross-sectional view as taken along line 6—6 of FIG. 5 showing one of many various types of securement mechanisms that may be employed to maintain the frame assembled.

FIG. 7 is an isolated view of the hinged member of the frame.

FIG. 8 is a cross-sectional view as taken along line 8—8 of FIG. 7.

FIG. 9 is a plan view of the present invention depicting the optional use of the arcuate member for when the present invention is utilized for bow hunting and the like.

FIG. 10 is a partial plan view of the arcuate support member of the present invention illustrating the elastic cord thereof.

FIG. 11 is an isolated view of a leaf attachment of the present invention.

FIG. 12 is an isolated view of a 3—dimensional exterior layer comprising a plurality of panels.

FIG. 13 is a side view of the present invention depicting a pit-blind set up and further showing the vertical L-shaped slots in a closed orientation for when the front window is only utilized during hunting.

FIG. 14A is a perspective view of the present invention with both of the vertical L-shaped slots in an open orientation for when the present invention is utilized for waterfowl hunting.

FIG. 14B is a perspective view of the present invention with both of the vertical slots in a closed orientation and further the vertical strips in place for when the present invention is utilized for deer hunting.

FIG. 14C is a perspective view of the present invention with at least one of the vertical slits having a portion thereof open with a screen positioned thereover. Further depicted are the sides of the covering bowed out by means of the arcuate rod forming a side window for affording a widened angle of view during bow hunting, observing or the like.

FIG. 15 is a front elevational view of the present invention showing the interior removable vertical flaps and removable penetrateable screen of the front window.

FIG. 16 is a side view of the present invention in a collapsed orientation with straps for allowing the present invention to be carried as a back-pack in which you can also carry small gear and the awning feature.

FIG. 17 is an example of one of the many various types of securement mechanisms for securing the relative position between the upper members and lower members.

FIG. 18A is a perspective view of the pile fastener straps utilized to maintain the arcuate rod in its operative orientation.

FIG. 18B is a perspective view of a sleeve utilized to maintain the arcuate rods in their operative orientation.

FIG. 19 is a top plan view of the removable awning of the present invention.

Similar reference characters refer to similar parts throughout the several views of the drawings.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular, to FIGS. 1-19 thereof, the preferred embodiment of the new and improved folding hunters ground blind embodying the principles and concepts of the present invention and generally designated by the reference number 10 will be described.

Specifically, it will be noted in the various Figures that the device relates to a new and improved folding hunters ground blind for providing comfort and concealment for extended periods of hunting, observing, or photographing wildlife. In its broadest context, the device consists of a folding frame portion, an adjustable arcuate support member and a two-layer cover system. Such components are individually configured and correlated with respect to each other so as to attain the desired objective.

The device 10 includes a folding frame portion 12 with a top member 14, a bottom member 16, a front member 18, and a rear member 20. The top member 14 has a generally rectangular shaped perimeter. A plurality of cross members 22 extend between opposed long supports 24 of the perimeter. The bottom member 16 has a generally rectangular shaped perimeter including telescoping long 26 and short supports 28. Corners of the bottom member 16 have upwardly extending receiving tubes 30 disposed thereon. The front member 18 has opposed upper members 32 and lower members 34. The upper members 32 are telescopically received within the lower members 34 or vice-versa. The optional removal of the telescoping upper and lower members 32,34 is facilitated through the use of a pivot assembly 36 disposed therein. Note FIG. 6. The telescoping nature of the various members of the frame is preferably afforded by a screw compression member 37. It should be noted, however, that any one of various telescoping control mechanisms may be employed. The lower members 34 are coupled with two of the upwardly extending receiving tubes 30 of the bottom member 16. The upper members 32 have a hinge member 38 coupled to the top member 14. A U-shaped support 40 extends between upper ends of the lower members 34 of the front member 18. The rear member 20 has opposed upper members 42 and lower members 44. The upper members 42 of the rear member 20 are telescopically received within the lower members 44 of the rear member 20 or vice-versa. The adjustment of the telescoping upper and lower members 42,44 is facilitated through the use of compression members disposed thereon. Such compression members may be disposed either exterior or interior of the telescoping members and may utilize bushings or the like. The compression members may readily be found in the art of swimming pool brushes, camera stands, etc. Alternatively, various other methods of coupling may be utilized. For example, the upper and lower members may be foldable instead of telescoping and a collar may be disposed over the hinge point to selectively effect erection of the frame. The lower members 44 of the rear member 20 are coupled with two of the upwardly extending receiving tubes 30 of the bottom member 16. The upper members 42 of the rear member 20 have a hinge member 46 coupled to the top member 14. The folding frame portion 12 is adapted for disassembling and folding into a unit that one person can backpack into a wilderness site. The adjustable length frame members provide versatility, allowing the device 10 to fit into tight spots amidst brush, to adapt to uneven ground and to accommodate occupants of different heights and equipment of various sizes such as camera tripod or a long bow and shotgun.

An adjustable arcuate support member 50 is secured to and extends around the rear member 20 of the folding frame portion 12. The adjustable arcuate support member 50 is comprised of a plurality of hollow bendable arcuate segments 52 with an elastic band 53 situated therethrough such that the arcuate support member may be conveniently assembled to form a U-shaped support or collapsed for storage and travel. Further, the U-shaped support is adjustable in length to accommodate various uses, as will become apparent later. It should be noted that the adjustable arcuate support member is utilized whenever the environment permits. This enlarges the frame for additional space during any one of various activities including bow hunting. For maintaining the cover taut during use, the tie down strips 74 located at a bottommost end of the interior layer are utilized to hold tight the sides of the covering by wrapping underneath the frame and adjustably securing to complimentary strips situated on an interior surface of the interior covering adjacent a bottom extent thereof. This affords the tautness needed when utilizing the rear arcuate rod as well as keeping the walls of the enclosure rigid and less likely to be blown around in the wind. Also, it serves as a means for closing the bottom of the L-shaped slots. For facilitating the purpose thereof, the tie down strips are constructed from a flexible material. The complimentary strips are positioned to allow various height adjustments correlating to any frame adjustments.

A two-layer cover system 58 is dimensioned for extending over the folding frame portion 12 and the arcuate support member 50 to form an enclosure. For reasons that will become apparent later, the cover system is slightly larger than the frame. The cover system 58 includes an interior layer 60 fabricated of a water-resistant camouflage material. The interior layer 60 includes a pair of door portions 62 formed by L-shaped vertical slots 64. While not shown, it should be noted that the door portions may be included on both sides of the present invention. The vertical slots 64 each have a pile type fastener strip 66 and a zipper disposed thereon corresponding to pile type fastener strip 68 and a zipper on each of the pair of door portions 62 for closure thereof. Preferably, the zipper is located on a top horizontal portion of the L-shaped slot and the pile fastener is located on a bottom vertical portion of the L-shaped slot. It should be noted that, alternatively, the zipper may also span down various lengths of the bottom vertical portion of the L-shaped slot including an entire length or a portion thereof. It should be understood that any part of the bottom vertical portion of the L-shaped slot that is not equipped with the zipper is, instead, preferably equipped with the pile fastener. The lower portions of the L-shaped slots are sized to allow various degrees of overlapping to compliment any alterations made to the frame. The interior layer 60 includes adjustable front and rear windows 70,72. The interior layer 60 has adjustable tie down strips 74 disposed on lower ends thereof and further loops 75 situated about the periphery at a central extent thereof. The loops are included for allowing the sides of the cover system to be bowed outwardly to a lesser degree than that which is accomplished by the arcuate rod. Further, the tie loops of each side may be employed independently of one another. Such features allow the interior space of the cover system to be enlarged in tight spots. The cover system 58 further includes an exterior layer 76 comprised of three dimensional camouflage panels securable to the interior layer 60. Note FIG. 12. The exterior layer 76 includes a plurality of holes, loops, etc for allowing the attachment of both natural and artificial vegetation 78. An example of artificial vegetation is shown in FIG. 11. The

two-layer cover system 58 helps to make the device 10 appear more natural, with a "bushlike" surface or appearance to the device 10 rather than a flat sided appearance. The rounded corners formed by the device 10 adds a more natural, rounded appearance.

With reference to FIG. 15, the front window has a removable screen 80 selectively situated thereover. The screen is attached along a lower edge thereof to a lower edge of the front window via a zipper. The mesh screen may be secured over the front window via a plurality of buttons 82 and hooks 92 positioned along the periphery of window. The screen is designed to keep insects out but can be shot through when hunting with a razor-headed arrow. Further, a slit can be cut through the windows to allow a gun barrel to protrude therethrough while gun hunting. Also provided over the front window is a plurality of vertical strips 84 removably coupled thereto. Such strips each have a width less than $\frac{1}{2}$ the width of the front window. Each strip is equipped with a pair of slits 86 adjacent a bottom edge thereof for securing to buttons 88 positioned on the lower edge of the window. A pair of reinforced eyelets 90 are situated adjacent an upper edge of each strip for releasably coupling with a plurality of hooks 92 positioned next to a top edge of the front window. In use, the strips reduce the amount of light that enters the blind and further conceals movement of a user therein. As shown in the Figures, all of the edges of the strips and the windows have leaf-shaped appendages protruding therefrom for affording a natural look. It should be noted that the rear window may be constructed with features similar to those of the front window. Further, all of the features associated with the windows are designed to be repositioned from inside the blind with very minimal noise.

Further provided is an awning 100 having a top face 102 with a semicircular configuration. The top face is connected to the frame above the front window in a plane in which the top of the blind resides. The top face is coupled by means of an arcuate rod which has ends which may be inserted within sleeves of the covering. Such awning further has a cover 104 formed of material similar to that of the cover system. When utilized, the cover suspends to an elevation level with the top edge of the front window for preventing light and rain from entering the blind.

To provide mobility, the foldable frame is adapted to collapse thereby forming a back pack 110. As shown in FIG. 16, such back pack is equipped with a pair of shoulder straps 112. To accomplish such collapsing, the telescoping long supports 26 of the frame are removed and shorted. Next, the front and rear members 18 & 20 are shortened and pivoted to reside in a plane in which the top member resides or can be removed completely and carried. Thereafter, the top member is folded along a central pivot point such that the cover system may be situated and contained between the cross members 22 or attached over cross members 22 and folded therein. Also, small gear and the awning device can be carried within the folded area.

The present invention is designed to afford both adjustability and versatility in that it is capable of being altered in the field to accommodate the hunting of various types of game and utilizing various types of weapons. For example, when a user wishes to hunt with more interior room or with a compound bow, the arcuate support member may be assembled and attached to the interior layer of the cover system in a horizontal plane. To accomplish such attachment, a fastener strap 120 may be employed to attach the rear portion of the arcuate support to the rear face of the covering, as shown in FIG. 18A. Further, the ends of the

arcuate member may be slidably inserted within sleeves 121 situated on the interior sides of the covering at a plurality of distances toward the front of the blind. Note FIG. 18B. As shown in FIG. 14C, the arcuate support may be utilized as indicated above and further a vertical portion of the front inverted L-shaped slots may be opened forming the side window feature. In addition, the screen may be disposed over the front opening and another triangular screen 122 may be situated in each of the vertical portions of the front inverted L-shaped slot via pile fasteners and buttons. By doing this, a widened angle of view is afforded during bow hunting or the like.

During hunting with a rifle, a user may choose to situate the end of such rifle between the vertical strips of the front window and rested on the gun rest 40. In the alternative, a slit may be made in the screen such that the rifle may be situated therethrough. Yet another option open to the hunter is to fire a bow directly through the screen.

The present invention is further adapted to be adjusted to accommodate the hunting of various game. For example during deer hunting, a user may close both of the inverted L-shaped vertical slots of each of the door portions. Note FIG. 14B. In addition, the vertical strips may be placed in the front opening. It should be noted that the concealment afforded by the closure of the inverted L-shaped slots in combination with the vertical strips provides the necessary camouflage for hunting skittish deer. While hunting waterfowl or the like, both inverted L-shaped slots may be opened, as shown in FIG. 14A.

It should be noted that during any of the foregoing uses of the present invention, the window and door features provide various combinations to accommodate hunting different types of game with various weapons or engaging in other activities such as photography and observing.

As to the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as being new and desired to be protected by Letters Patent of the United States is as follows:

1. A folding hunters ground blind for providing comfort and concealment for extended periods of hunting, observing, ice fishing, or photographing wildlife comprising, in combination:

a folding frame portion including a top member, a bottom member, a front member, and a rear member, the top member having a generally rectangular shaped perimeter, a plurality of cross members extend between opposed long supports of the perimeter, the bottom member having a generally rectangular shaped perimeter including telescoping long and short supports,

corners of the bottom member having upwardly extending receiving tubes disposed thereon, the front member having opposed upper members and lower members, the upper members telescopically coupled with the lower members, the lower members coupled with two of the upwardly extending receiving tubes of the bottom member, the upper members having a hinge member coupled to the top member, a U-shaped support extends between upper ends of the lower members of the front member, the rear member having opposed upper members and lower members, the upper members of the rear member telescopically coupled with the lower members of the rear member, the lower members of the rear member coupled with two of the upwardly extending receiving tubes of the bottom member, the upper members of the rear member having a hinge member coupled to the top member;

an adjustable arcuate support member secured to the cover system and extending adjacent the rear member of the folding frame portion;

a two-layer cover system dimensioned for extending over the folding frame portion and the arcuate support member to form an enclosure, the cover system including an interior layer fabricated of water-resistant camouflage material, the interior layer including a pair of door portions formed by inverted L-shaped openings, the vertical portions each having a bottom pile type fastener strip and a top zipper disposed thereon corresponding to a bottom pile type fastener strip and a top zipper on each one of the pair of door portions for closure thereof wherein the pile type fasteners allow for both covering and frame adjustments, the interior layer including side windows with a screen and adjustable front and rear windows each with a quietly removable screen that keeps out insects and a plurality of quietly removable vertical strips wherein all of the edges of the strips and the windows have leaf-shaped appendages protruding therefrom, the interior layer having adjustable tie down strips disposed on lower ends thereof and further a plurality of tie down loops centrally disposed thereon, the cover system, including an exterior layer comprised of three dimensional camouflage panels securable to the interior layer, the exterior layer including natural and artificial vegetation.

2. A hunters ground blind comprising:

a frame portion foldable in the form of a backpack; said frame portion includes a top member, a bottom member, a front member, and a rear member;

a cover system dimensioned to extend over the frame portion; said cover system is equipped with a pair of inverted L-shaped slots adapted to allow the selective opening thereover when hunting various game;

a front window situated on the cover system with a plurality of vertical strips removably coupled thereover; said front window further has a removable screen selectively situated thereover, whereby the screen is adapted to be penetrated by a weapon during use;

an adjustable support member is secured to the cover system adjacent a rear portion of the frame portion for providing more room within the blind for hunting;

said cover system further has a removable awning with a semicircular configuration situated above the front window for precluding light from entering the blind;

the top member having a generally rectangular shaped perimeter, a plurality of cross members extend between opposed long supports of the perimeter, the bottom member having a generally rectangular shaped perimeter including telescoping long and short supports, corners of the bottom member having upwardly extending receiving tubes disposed thereon, the front member having opposed first upper members and first lower members, said first upper members telescopically coupled with the first lower members, the first lower members coupled with two of the upwardly extending receiving tubes of the bottom member, the first upper members having a hinge member coupled to the top member, a U-shaped support extends between upper ends of the lower members of the front member, the rear member having opposed second upper members and second lower members, the second upper members telescopically coupled with the second lower members, the second lower members coupled with two of the upwardly extending receiving tubes of the bottom member, the second upper members having a hinge member coupled to the top member.

* * * * *



US00586296

United States Patent [19] Johnson

[11] Patent Number: 5,862,967
[45] Date of Patent: Jan. 26, 1999

- [54] EQUIPMENT SUPPORT FRAME FOR USE WITH BACKPACKS AND THE LIKE
- [76] Inventor: Scott Johnson, HC5 Box 135, Roseau, Minn. 56751
- [21] Appl. No.: 974,620
- [22] Filed: Nov. 19, 1997
- [51] Int. Cl.⁶ A45F 4/00
- [52] U.S. Cl. 224/577; 224/153; 224/632; 224/576; 224/908; 224/913; 248/177.1
- [58] Field of Search 248/177, 121, 248/127, 188, 188.5; 224/153, 632, 908, 913, 576, 577

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Primary Examiner—Ramon O. Ramirez
Attorney, Agent, or Firm—Michael J. Tavella

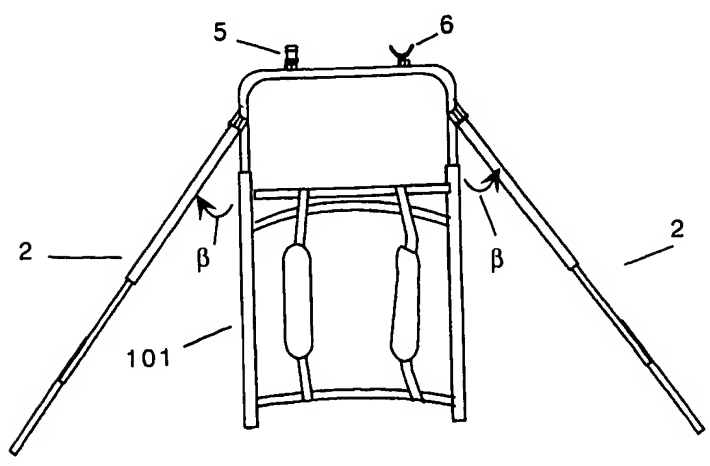
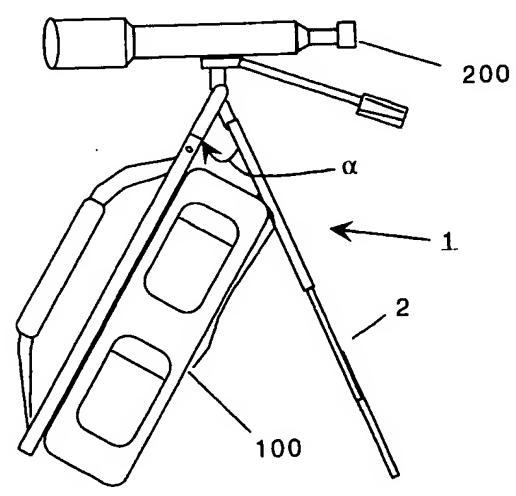
[57] ABSTRACT

A frame system that converts to a four-leg support base for use with backpacks. The base eliminates the need to carry a tripod or monopod. Two threaded bosses are use to accommodate attachments such as a shooting rest or to accommodate surveillance or test equipment. The main part of the frame replaces the top hoop found on many external frame backpacks. The frame has two angled members that accept a pair of legs. These legs are made of several parts to permit many configurations. The frame can be removed from the backpack as well. This makes a free standing base that can be used in seated or prone positions; it also leaves the pack portion free to be used separately. Nylon sides or hoods can be attached to make the pack assembly act as a blind or a windbreak. Also, an aluminum table can be attached to the frame for cooking, etc., as desired.

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13 Claims, 12 Drawing Sheets



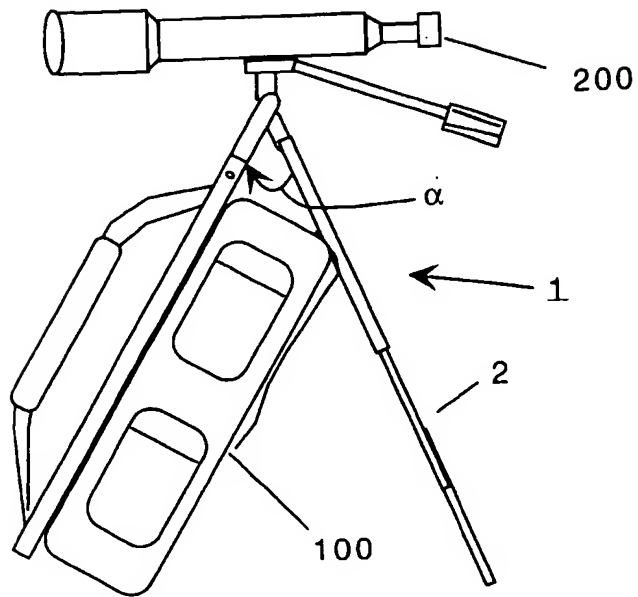


Figure 1

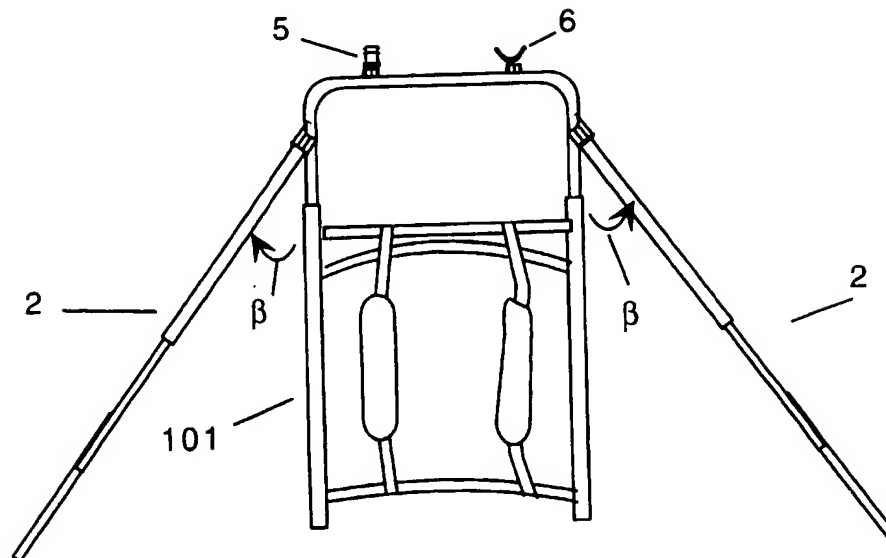


Figure 2

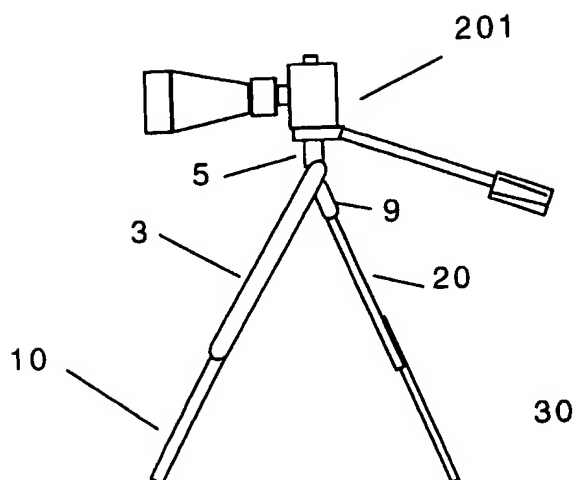


Figure 3

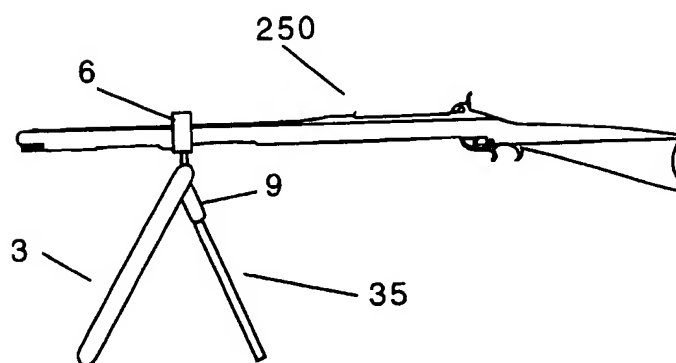


Figure 4

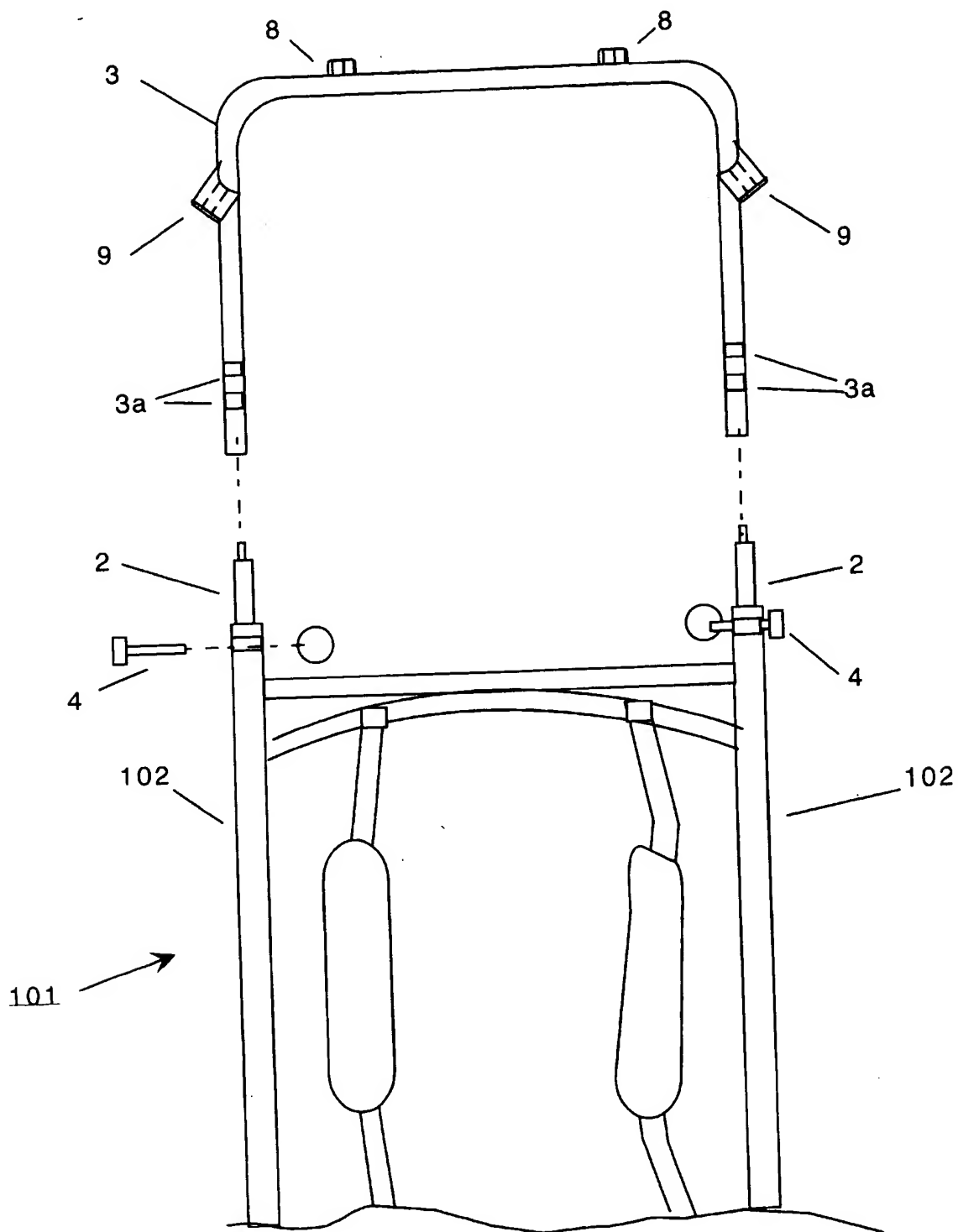


Figure 5



Figure 6

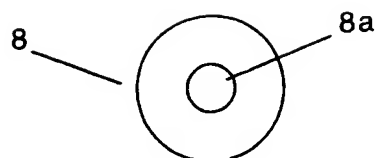


Figure 7

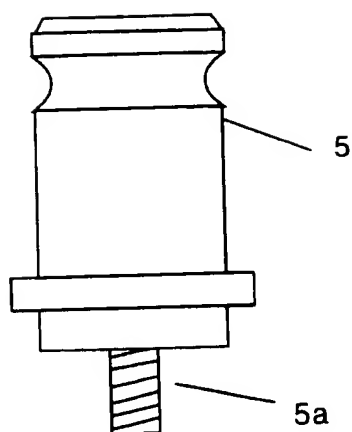


Figure 8a

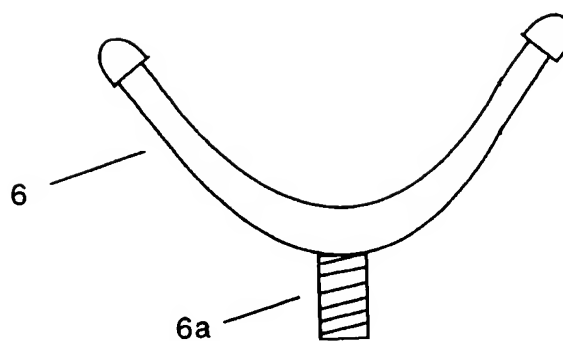


Figure 8b

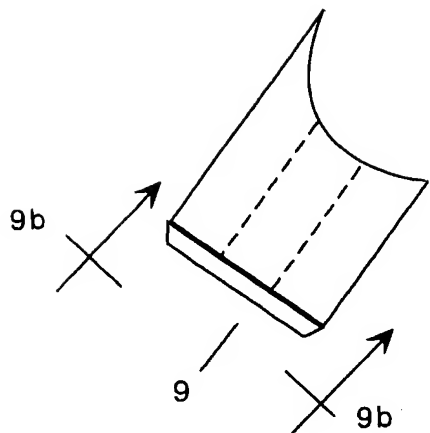


Figure 9a

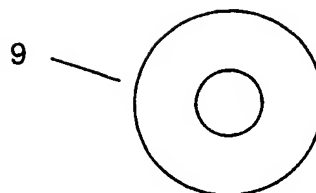


Figure 9b

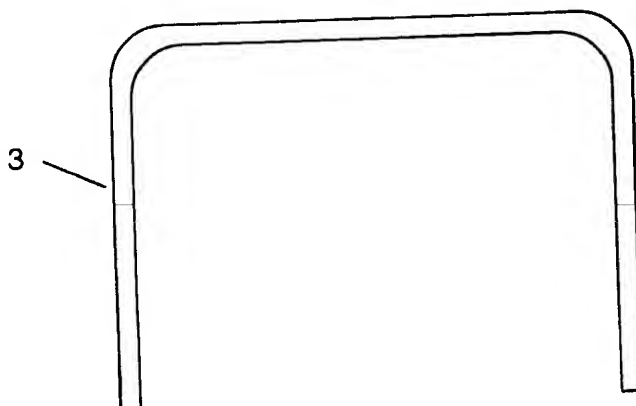


Figure 10

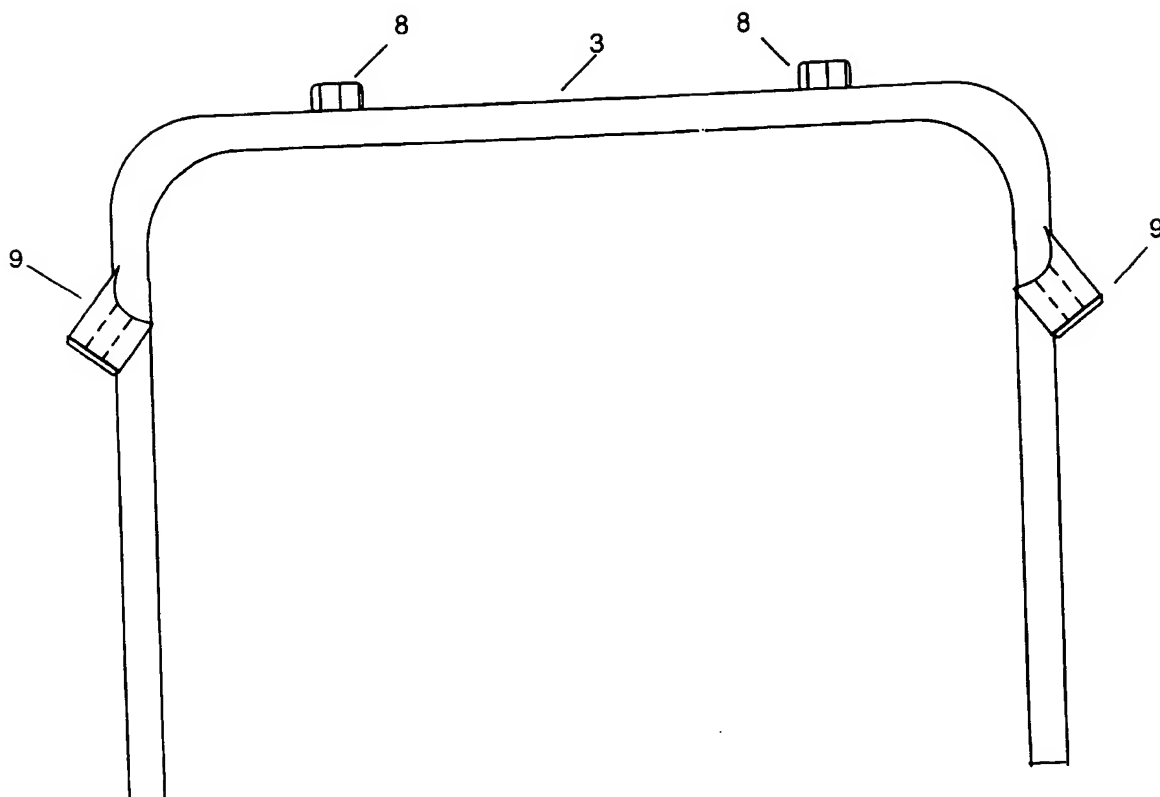


Figure 11

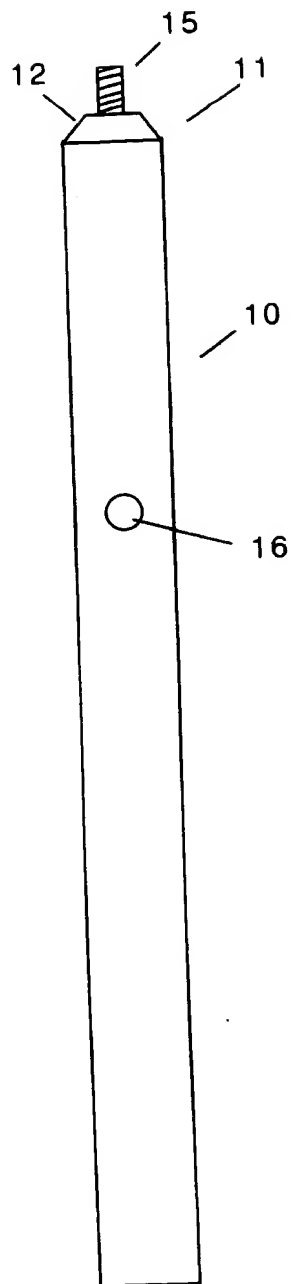


Figure 12

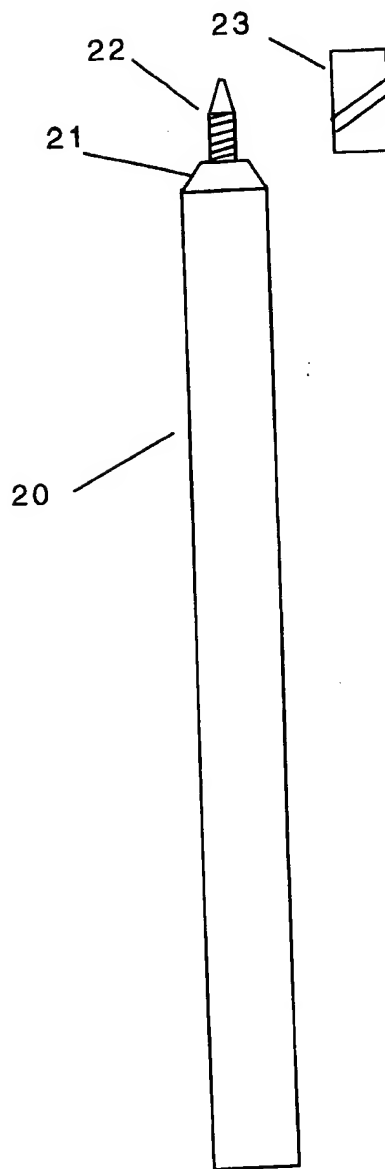


Figure 13

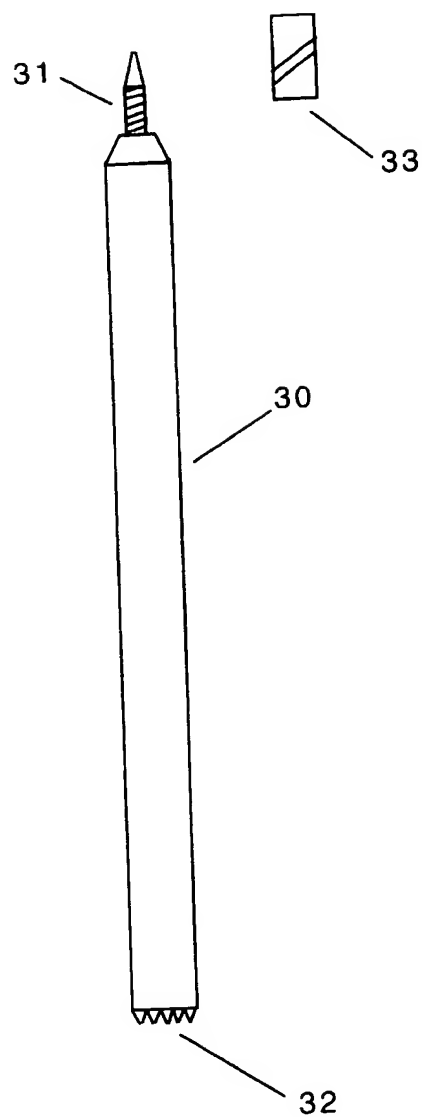


Figure 14

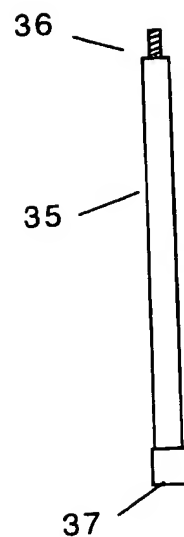


Figure 15

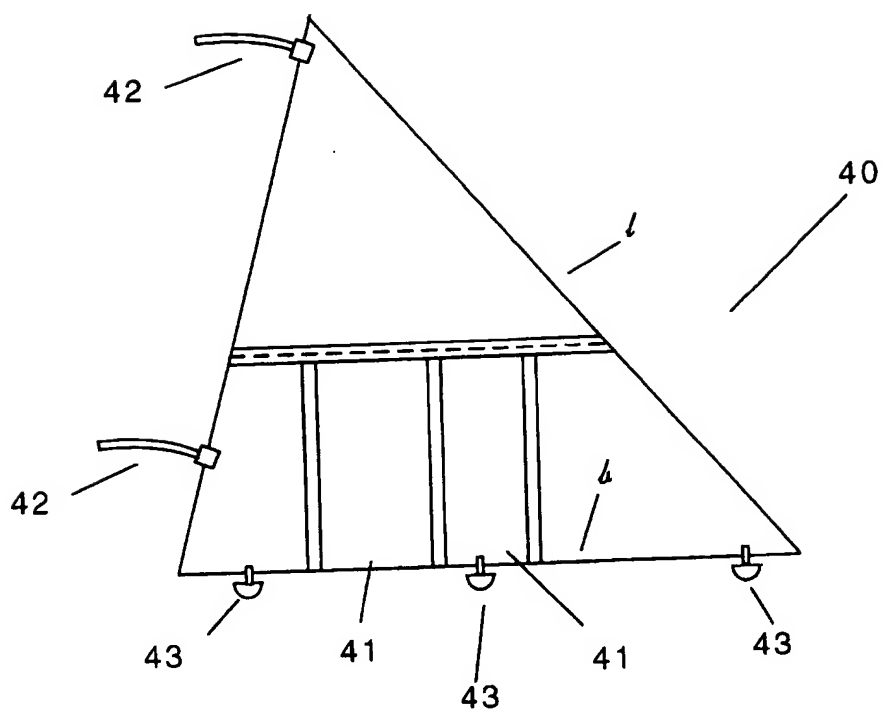


Figure 16

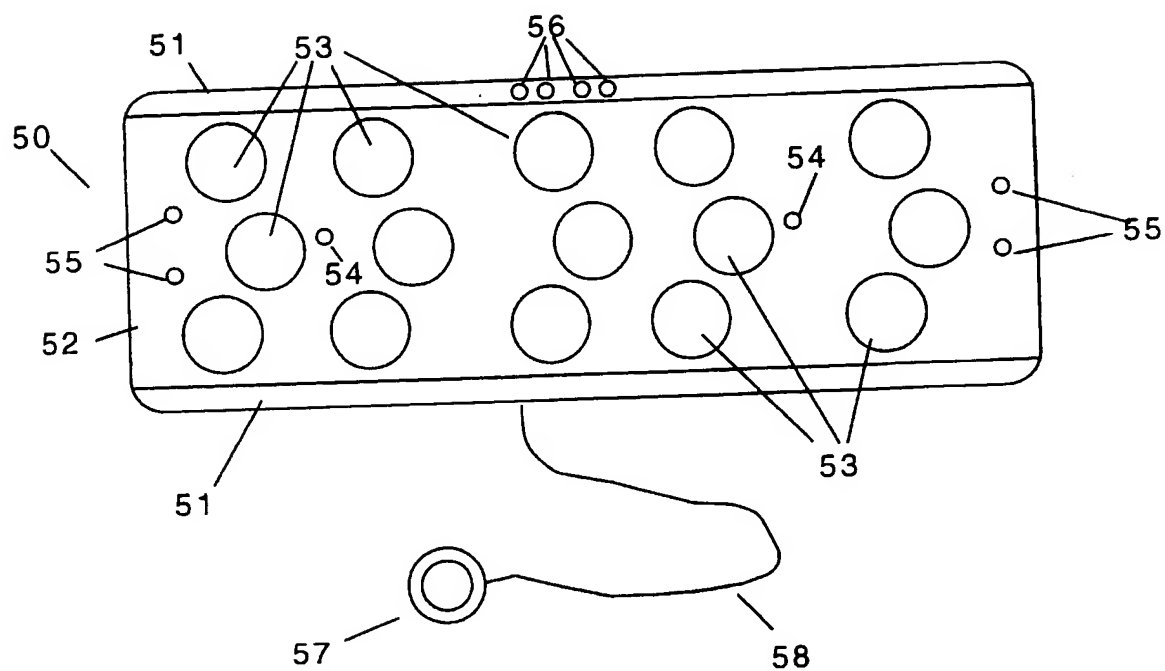


Figure 17

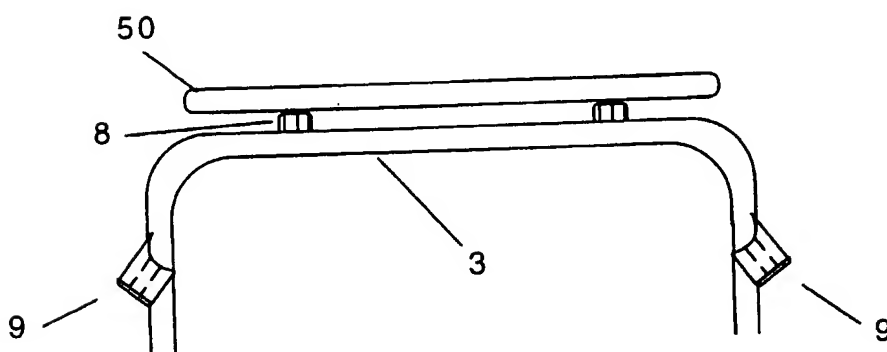


Figure 18

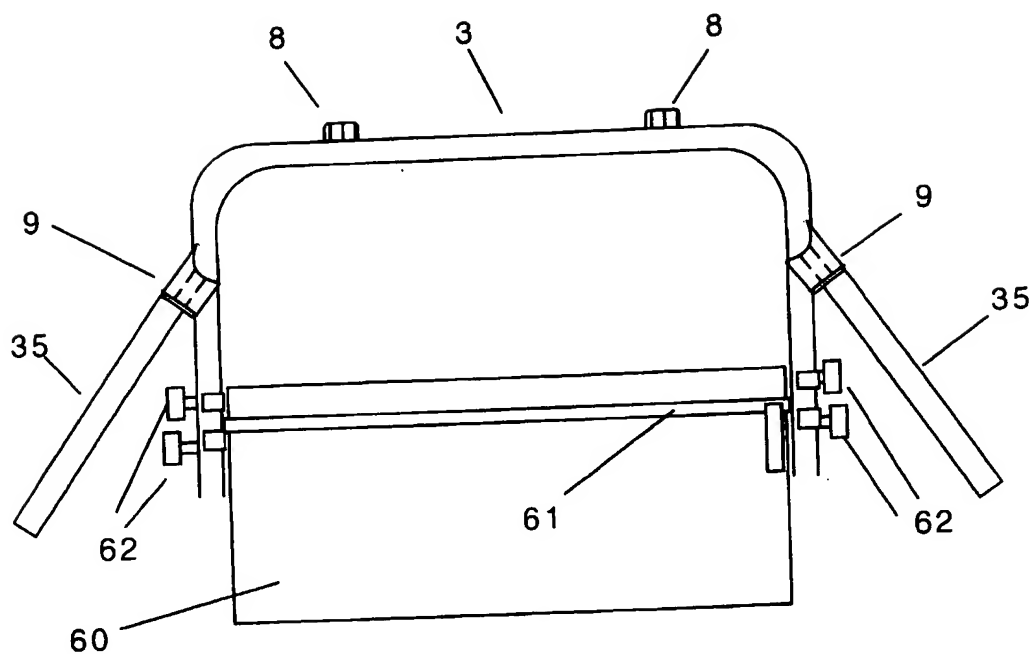


Figure 19

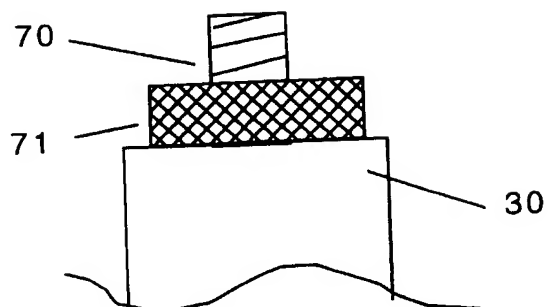


Figure 20

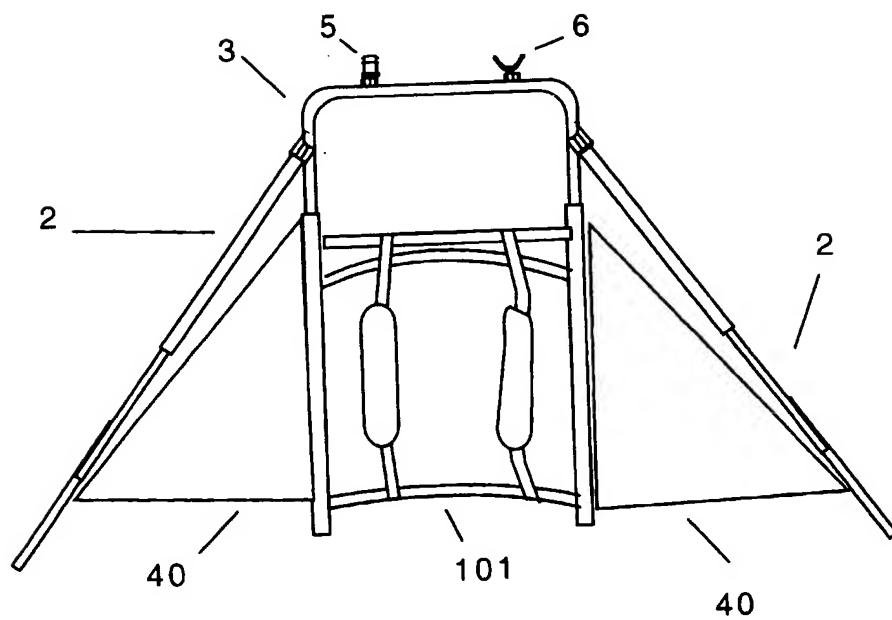


Figure 21

EQUIPMENT SUPPORT FRAME FOR USE WITH BACKPACKS AND THE LIKE

TITLE OF THE INVENTION

Equipment Support Frame For Use With Backpacks And
The Like

This invention relates to equipment supports for cameras, guns and the like and particularly to equipment supports for cameras, guns and the like, that have a frame integral with a backpack frame.

BACKGROUND OF THE INVENTION

Outdoor activities are an increasing part of our lifestyle. Hunting, camping and backpacking account for billions of dollars in equipment sales and permit fees. Other than car camping or use of a recreational vehicle, all overnight and many-day outdoor activities require the use of some type of backpack to hold gear, equipment, clothing and food. Many backpack styles have been designed to carry this equipment and these designs work well.

Many outdoor activities require the use of other types of equipment as well. For example, hunters often use rifles and spotting scopes. Many people carry cameras, which can be rather large if professional photographs are desired. In using these devices, some type of support is needed as well, such as a tripod. Because standard tripods tend to be heavy and cumbersome to carry into the field, lightweight tripods and even monopods have been developed. Despite their convenience, these supports are still bulky and sometimes heavy to carry. This reduces the amount of other supplies that can be carried and often limits the length of the trip to the field.

BRIEF SUMMARY OF THE INVENTION

The instant invention overcomes these problems. It is a frame system that converts to a four-leg base. This base eliminates the need to carry a tripod or monopod. The frame accepts an ultralight head for spotting scopes, binoculars, cameras, and camcorders. Two threaded bosses are provided to hold attachments such as a shooting rest, or to accommodate surveillance or test equipment. The top of the frame is wide enough to hold both supports. Thus, a hunter can have a spotting scope mounted on one side of the frame and a shooting support on the other.

The main part of the frame is designed to replace the top hoop found on many external frame backpacks. In ordinary use, the main frame acts like the hoop of an ordinary backpack. The frame is designed with two angled members that accept a pair of legs. These legs, when attached to the frame, make the pack into a "quadpod".

The threaded bosses are attached to the top of the main frame. When the frame is set up, many types of devices can be attached to the bosses. The ballast of the backpack makes the stand very sturdy and stable, even in windy conditions.

The support frame can be removed from the backpack as well. This makes a free standing base that can be used in seated or prone positions; it also leaves the pack portion free to be used separately.

As in all backpacking, weight is a critical factor. The frame and legs are designed from all welded aluminum construction. Stainless steel fasteners are used for durability. When fully assembled, the unit weighs less than one pound. When stored on the backpack, there is no bulky packaging. The unit conforms the dimensions of the backpack. This not only produces an ultralight support system, but also one that saves valuable pack space.

Other attachments are available. Nylon sides or hoods can be attached to make the pack assembly act as a blind or a windbreak. Also, an aluminum table can be attached to the frame for cooking, etc., as desired.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of the preferred embodiment, fully assembled.

FIG. 2 is a rear view of the preferred embodiment, as fully assembled.

FIG. 3 is a side view of a second embodiment of the frame system.

FIG. 4 is side view of a third embodiment of the frame system.

FIG. 5 is a rear detail partially exploded view of a backpack frame, showing the placement of frame components for storage.

FIG. 6 is a side view of a threaded boss.

FIG. 7 is a top view of the threaded boss.

FIG. 8a is a side view of the universal equipment mount.

FIG. 8b is a side view of the gun support.

FIG. 9a is a side view of the leg support.

FIG. 9b is an end view of the leg support.

FIG. 10 is a front view of the main frame hoop, ready for modification.

FIG. 11 is a rear view of the main frame hoop as fully modified, ready for use.

FIG. 12 is a side view of the upper leg member.

FIG. 13 is a side view of the center leg member.

FIG. 14 is a side view of the lower leg member.

FIG. 15 is a side view of the auxiliary leg member.

FIG. 16 is a side detail of a side hood.

FIG. 17 is a top view of the portable table.

FIG. 18 is a side view of the portable table, mounted on the threaded bosses.

FIG. 19 is a detail view of the device with the weight bag in place.

FIG. 20 is a detail view of a knurled locking nut on one of the threaded studs.

FIG. 21 is a rear view of the preferred embodiment with the side hood in place.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to FIGS. 1 and 2, the basic makeup of my equipment support is shown. FIG. 1 shows a side view of the system as fully assembled. My support is designed to be used with a backpack 100. As shown in FIGS. 1 and 2, it is not necessary to remove the back pack to use the system 1. In fact, the backpack 100 acts to help stabilize the support. As shown in FIGS. 1 and 2, two telescoping legs 2 are used to hold the back pack and convert it into a support structure. Various types of equipment supports are attached to equipment bosses 8 that are secured to a removable hoop 3 as shown in FIG. 2. It is also possible to use the support 1 without using a back pack. FIG. 3 shows one configuration of the support without a pack. FIG. 4 shows another configuration that uses even fewer components. This configuration is used for prone position shooting. These configurations are discussed in greater detail below.

The support 1 has several components. FIGS. 5-15 show details of all the components of the system 1. FIG. 5 shows

3

the placement of the major components as carried in a backpack 100. Most external frame backpacks have a harness frame 101 that has two vertical frame members 102 as shown. Many backpack frames 101 have a curved hoop that can be used to tie equipment or other items. To use my system, the curved hoop is discarded and replaced with a new hoop 3. FIG. 5 shows the new hoop 3 as it aligns with the frame 101. Specific details of the hoop are discussed below. The two telescoping legs 2 are placed within the vertical frame members 102 for storage, as shown in FIG. 5. Once the legs 2 are stored, the hoop can be placed in the frame 101. Two pins 4 are used to secure the hoop to the frame as shown through holes 3a in the hoop 3 (see FIG. 5). At this point, the backpack can be used normally, with the support system being stored out of the way, ready for use. As described below, the support can be readily removed from the frame and assembled when needed, without difficulty.

As shown in FIG. 5, the hoop 3 has a number of components attached to it. Two threaded bosses 8 are attached to the top of the hoop 3 as shown. FIGS. 6 and 7 show one of the threaded bosses 8. The bosses 8 are threaded with 1/4-20 threads in a hole 8a, to accept a rifle rest or attachments for spotting scopes, etc. FIG. 6 is a side view of a boss 8 and FIG. 7 is a top view of the boss. The boss 8 is welded to the top hoop 3 as shown.

FIG. 8a shows a machined fitting 5 that accepts a mount such as a VELBON PH-241 camera mount (not shown). This mount is commonly used to secure cameras, video recorders and other similar types of equipment. This fitting 5 has a threaded stud 5a that screws into one of the bosses 8 that are welded to the hoop 3 as shown. FIG. 8b shows a "V" shaped gun support 6 that also has a threaded stud 6a for attaching the gun support 6 to one of the threaded bosses 8. In this way, it is possible to mount a spotting scope on the stud 5, on one side of the hoop 3, while supporting a rifle on the gun support 6 on the other side of the hoop 3. Of course, different mounts can be used as desired for any purpose. For example, a table 60 can be used, as discussed below.

Returning to the structure of the device, FIG. 5 shows two angled members 9 that are attached to the top hoop 3 as shown. FIG. 9a is a side view of one of these angled members 9. In the preferred embodiment, the angled members 9 are 0.625 in solid aluminum stock that are formed as shown and are threaded and tapped to accept a 1/4-20 stainless steel stud. See FIG. 9b. The angled members 9 are welded to the sides of the top hoop 3 as shown. In the preferred embodiment, the members are set back at an angle of 37° (angle α) and are turned out at a 30° angle (angle β). See FIGS. 1 and 2, which illustrate these two angles.

FIG. 10 is a front view of the top hoop 3 before it is modified with the various members. In the preferred embodiment, this hoop 3 is a piece of 0.753 diameter by 0.062 inch wall aluminum tubing that is 36 inches long. It is bent with two 90° 3 inch radius bends as shown. This produces a center to center width between the bottom ends of the tube, of 13.375 inches. This dimension is important because it matches the width of the vertical members of most backpack frames. Of course, this dimension can be changed as desired to accommodate any size frame.

FIG. 11 shows a detail view of the top hoop 3 with the threaded bosses 8 and angled members 9, discussed above, welded in place.

FIGS. 12-15 show details of the telescoping leg system 2. In the basic system, three separate parts are used. The first, is the upper leg 10. See FIG. 12. This leg 10 has an overall length in the preferred embodiment of 15.5 inches. Of

course, this length can vary as desired. The leg 10 is made of 0.625" outside diameter (o. d.) aluminum tubing that has a 0.5" inside diameter (i. d.). The top 11 of the leg 10 is closed with an aluminum insert 12 that is welded into the end of the leg 10 as shown. The insert 12 is fitted with a threaded stud 15 that has 1/4-20 threaded to be compatible with the angled members that are attached to hoop 3. The leg 10 also has a mounting hole 16 as shown. This hole is used for securing the legs to the pack (see FIG. 5) and for use in the configuration of FIG. 3, as discussed below.

FIG. 13 shows the center leg 20. This leg is the middle portion of the support legs as shown in FIGS. 1 and 2. It also forms the top portion of the rear legs in FIG. 3, as discussed below. In the preferred embodiment, the center leg 20 is 14.75" long and is made of 0.500 o. d. aluminum tube. This tube also has a 0.375" i. d. A plug 21 is tack welded to the inside of the leg 20 to support a 1/4-20 threaded stud 22 that extends from one the top of leg 20 as shown. An expanding plug 23 screws onto the stud 22 this expanding plug 23 is used to secure the center leg within the top leg 10 when the full leg system is used (FIGS. 1 and 2). The center leg is inserted into top leg 10 until the expanding plug 23 is sufficiently covered. The center leg 20 is then turned until the expanding plug secures the leg 20 within the leg 10. Use of expanding plugs allows for the quick assembly of the legs and for fast adjustment of the legs as well.

FIG. 14 shows the third (or lower) leg 30. This leg is shown at the bottom of the support system in FIGS. 1 and 2. In the preferred embodiment, leg 30 is made of 0.390" o. d. solid aluminum rod. A 10-32 threaded stud 31 is attached to one end of the rod as shown. The other end of the leg 30 is fitted with a rubber or plastic gripper foot 32. As in the case of the center leg 20, the third leg 30 has an expanding plug 33 that is secured to the 10-32 stud 31. The expanding plug 33 is used to secure the leg 30 into the center leg 20 in the same manner as that discussed above for the center leg.

The three legs form the basic structure for the support system. There are several other components for specialized functions. FIG. 15 shows an auxiliary leg 35 used in the configuration of FIG. 4 (this figure is discussed in greater detail below). The auxiliary leg 35 is made of aluminum rod and, in the preferred embodiment, is eight inches long. The leg 35 is fitted with a 14-20 stud 36 for fitting to the top leg 10 when used in the FIG. 4 configuration. A rubber foot 37 is provided to give the leg 35 a non-skid base.

FIG. 16 shows a hood or side piece 40 that is attached to the backpack as shown in FIG. 19. In the preferred embodiment, the hood 40 is made of CORDURA NYLON. The hood 40 can be made in solid colors or a camouflage pattern. The hood 40 can have a number of pockets 41 as shown. Straps 42 are provided as shown to attach the hood 40 to the backpack frame 101. Loops or D-rings 43 are provided to allow the hood 40 to be staked down. In the preferred embodiment, the long edge 1 of the hood 40 is 42 inches. The base b is 32 inches. The hood 40 can be used as a wind break or as a shelter or partial blind.

FIGS. 17 and 18 show use of small table 50. FIG. 17 is a top view of the table 50. The table 50 has curved edges 51 as shown. The table 50 also has a flat base 52. Several large holes 53 are provided for weight reduction. These holes 53 are arranged in pattern over the surface of the base as shown. Two 1/4 inch mounting holes 54 are positioned in the base 52 as shown. These mounting holes align with the threaded bosses 8. In addition, several tapped 1/4-20 holes 55 are provided around the base as shown. Holes 55 are used to secure equipment or other devices on the table. In addition,

a number of tapped $\frac{1}{4}$ -20 holes 56 are provided to mount and holds a number of $\frac{1}{4}$ -20 screws. These holes 56 are provided only to hold the screws for storage. Finally, a washer 57 and a small NYLON line 58 are attached to the table 50. The washer 57 is used as a field screwdriver to secure the $\frac{1}{4}$ -20 screws in the field. The line 58 keeps the washer 57 from being lost.

FIG. 18 shows a side view of the table as mounted to the top hoop 3. When used with various configurations of leg supports, the table 50 can be used as a bench rest for shooting, or as a table for holding a stove for cooking, eating, or other activities. When the table 50 is used as a bench rest, or the configuration of FIG. 4 is used by itself, a weight bag 60 can be used to provide further stability. FIG. 19 shows a top view of the FIG. 4 configuration with the weight bag 60 in place. The weight bag 60 has a zipper 61 and is secured to the auxiliary leg 35 using four pins 62 that fit through holes in the bag 60 and in the leg 35. The bag 60 can be filled with lead or sand for the desired weight.

For all configuration, the lower legs can be fitted with a threaded stud 70 and a jamb nut 71 as shown in FIG. 20. This stud and jamb nut are used to level the assembly in the field. The jamb nut 71 is used to tighten up the stud 70 when final level is reached. This stud and nut combination is an option and is not preferred because dirt, mud and snow can block the threads, making the threads useless in the field. However, in bench shooting, the level studs 70 may be preferred because here, cleanliness is not a problem and greater accuracy in leveling may be needed.

Now details of actual use are discussed. FIGS. 1 and 2 show the legs, fully extended and supporting a backpack. FIG. 1 shows a spotting scope 200 in place. FIG. 2 shows the universal mount 5 and the "V" shaped gun rest 6 is mounted to the other boss 8.

FIG. 3 shows arrangement where no backpack 100 is used. Here, the legs and top hoop are used to make a support for seated shooting or spotting. The top hoop 3 has a camera 201 secured to one of the top bosses 8 (again using the universal mount 5). In this configuration, two top legs 10 extend forward from the top hoop 3 as shown. Two center legs 20 attach to the angled pieces 9 as shown, using the threaded studs 22. Two lower legs 30 are then attached to the center legs using the expanding plugs 33. By adjusting the length of the lower legs, 30 this configuration is adjustable from 17 to 24 inches in height.

FIG. 4 shows the configuration for prone shooting. This configuration uses the top hoop 3 alone, with auxiliary legs 35 being screwed into the angled members 9. Here a rifle 250 is shown in the "V" shaped gun mount 6.

Finally, FIG. 21 is a rear view of the backpack assembly of FIG. 2, showing two hoods 40 in place. The hoods are attached to the backpack using the straps provided as discussed above and may be staked to the ground using the D-rings provided.

The present disclosure should not be construed in any limited sense other than that limited by the scope of the claims having regard to the teachings herein and the prior art being apparent with the preferred form of the invention disclosed herein and which reveals details of structure of a preferred form necessary for a better understanding of the invention and may be subject to change by skilled persons within the scope of the invention without departing from the concept thereof.

I claim:

1. A support system for use with a backpack having an external frame comprising:
 - a) a top hoop, removably installed in said external frame;
 - b) at least one threaded boss, fixedly attached to said top loop, for securing an attachment piece thereto;

- c) a pair of leg attachment members, fixedly attached to said top loop and extending outwardly therefrom;
 - d) a pair of telescoping leg members, removably attached to said pair of leg attachment members, said pair of telescoping leg members each having a length, wherein each leg member of said pair of telescoping leg members further includes
 - i) a top leg member, said top leg member having a means for engaging one of said pair of leg attachment members, said top leg member also having a bottom,
 - ii) a center leg member, said center leg member being slidably attached to the bottom of said top leg member, said center leg member also having a bottom, and
 - iii) a bottom leg member, being slidably attached to the bottom of said center leg member;
 - e) a means for adjusting the length of said pair of telescoping legs; and
 - f) a means for temporarily locking said pair of telescoping legs into a fixed length, including i) a first expansion bolt, removably attached to said center leg member, that engages said top leg member when expanded to lock said center leg member in a temporarily fixed position, and
 - ii) a second expansion bolt, removably attached to said bottom leg member, that engages said center leg member when expanded to lock said bottom leg member in a temporarily fixed position.
2. The support system of claim 1 further comprising a pair of hoods, removably attached to said support system.
 3. The support system of claim 1 further comprising a second threaded boss, fixedly attached to said top hoop.
 4. The support system of claim 3 wherein a gun mount is removably attached to a threaded boss and wherein an equipment mount is removably attached to said second threaded boss.
 5. The support system of claim 4 wherein a spotting scope is removably mounted to said equipment mount.
 6. The support system of claim 3 further comprising a table, removably attached to said threaded bosses; and a means for attaching said table to said threaded bosses.
 7. The support system of claim 1 further comprising a gun mount, removably attached to said threaded boss.
 8. The support system of claim 1 further comprising an equipment mount, removably attached to said threaded boss.
 9. The support system of claim 1 wherein said center leg member and said bottom leg member are temporarily fixed together and removably attached to said pair of leg attachment members to form a reduced-height support stand.
 10. The support system of claim 1 further comprising a pair of auxiliary legs, said pair of auxiliary legs having a means for removably attaching said pair of auxiliary legs to said pair of leg attachment members.
 11. The support system of claim 10 wherein said pair of auxiliary legs are removably attached to said pair of leg attachment members to form a further reduced-height support stand.
 12. The support system of claim 11 further comprising a weight bag; and a means for attaching said weight bag to said top hoop.
 13. The support system of claim 10, wherein said top leg member, said center leg member, and said bottom leg member are nested together for storage.



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United States Patent [19]

Camara

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[54] PORTABLE ENVIRONMENTAL BARRIER APPARATUS

[76] Inventor: Kevin M. Camara, 534 Edelweiss Dr., San Jose, Calif. 95136

[21] Appl. No.: 20,454

[22] Filed: Feb. 9, 1998

Related U.S. Application Data

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[51] Int. Cl. ⁶ A45F 4/02; A45F 4/04

[52] U.S. Cl. 224/153; 224/583; 224/576; 256/25; 135/143; 383/4

[58] Field of Search 224/575, 576, 224/153, 154, 581, 582, 583; 256/24, 25; 135/121, 123, 143, 144, 117, 96, 97; 383/4; 190/1, 2

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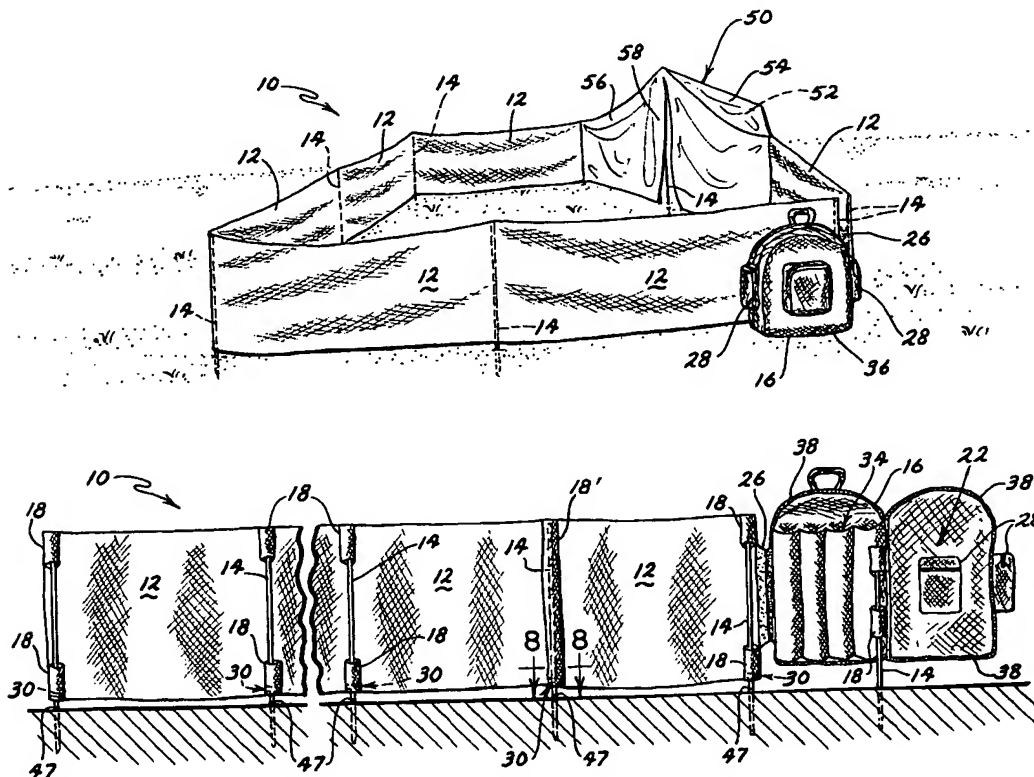
Primary Examiner—Allan N. Shoap
Assistant Examiner—Gregory M. Vidovich
Attorney, Agent, or Firm—Larkin, Hoffman, Daly & Lindgren, Ltd.

[57]

ABSTRACT

A portable barrier apparatus is disclosed in this specification defining a multi-sectioned barrier for protection against wind and sand in various outdoor environments. Additionally the barrier may be assembled and used as a child or pet restraint enclosure, a privacy barrier, or a temporary personal effect storage site. The apparatus includes a connected plurality of flexible barrier panel members which may be supported in an upright manner with a plurality of pole members. The apparatus further includes a back pack or similar device for transporting the barrier in an undeployed configuration. The invention provides that the back pack can be independently utilized away from the barrier. The invention further provides an accessory enclosure structure which is attachable to the barrier.

20 Claims, 3 Drawing Sheets



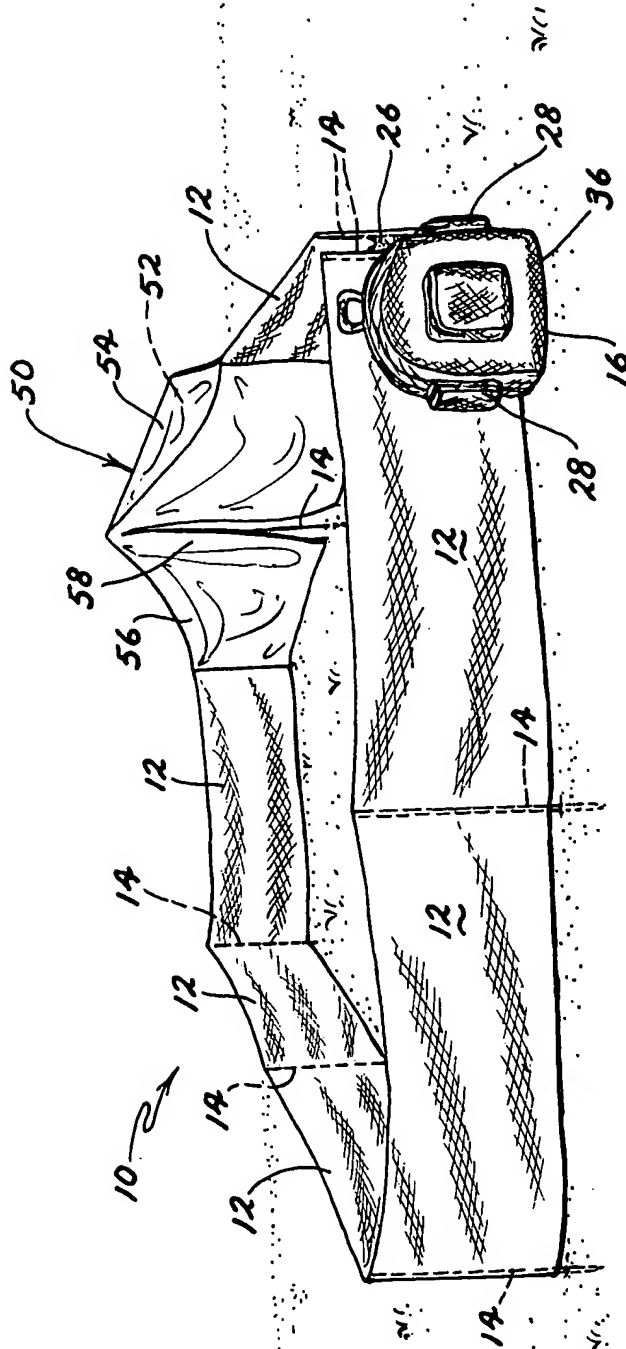
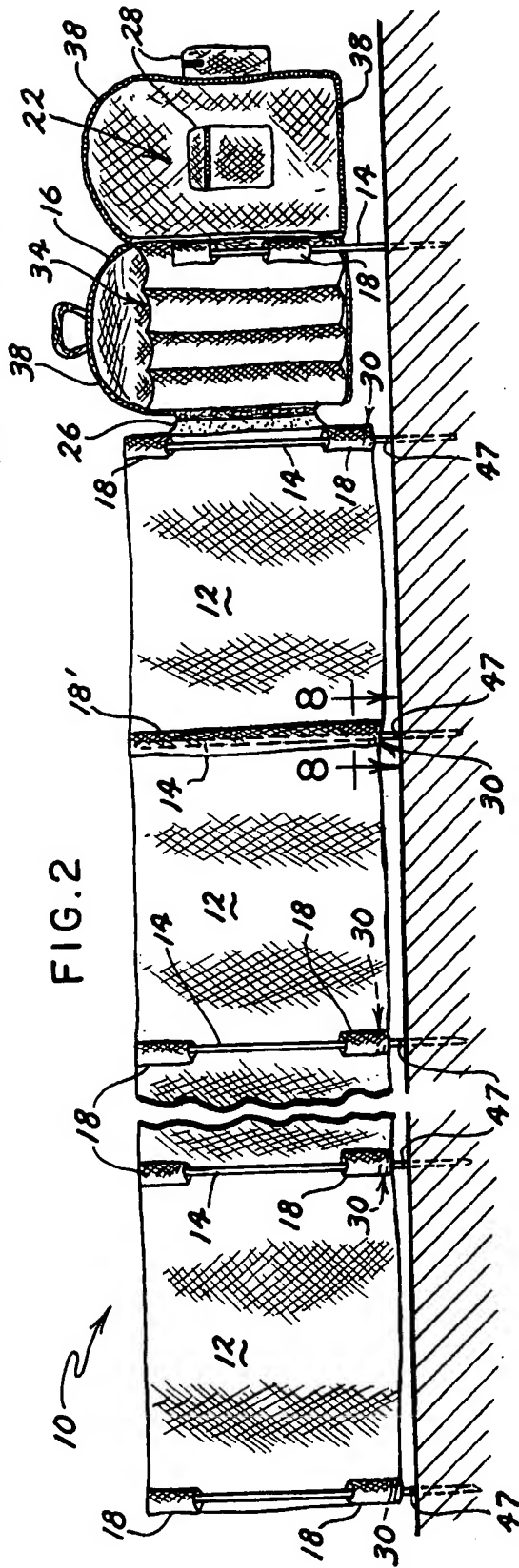
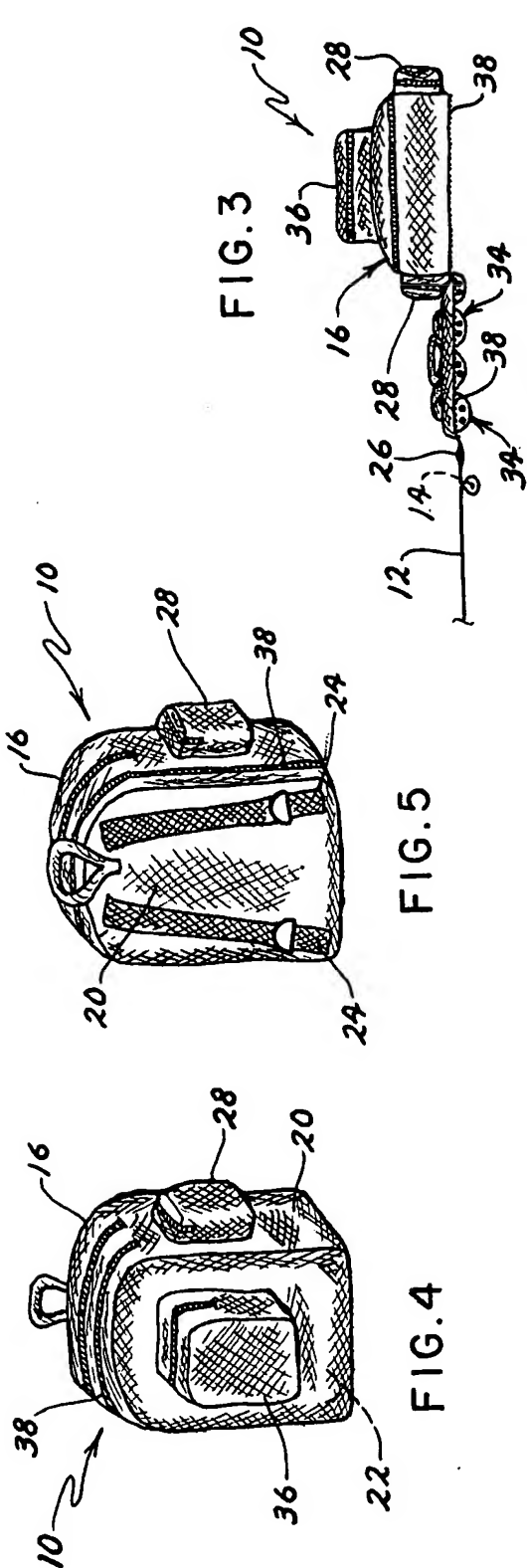


FIG. 1



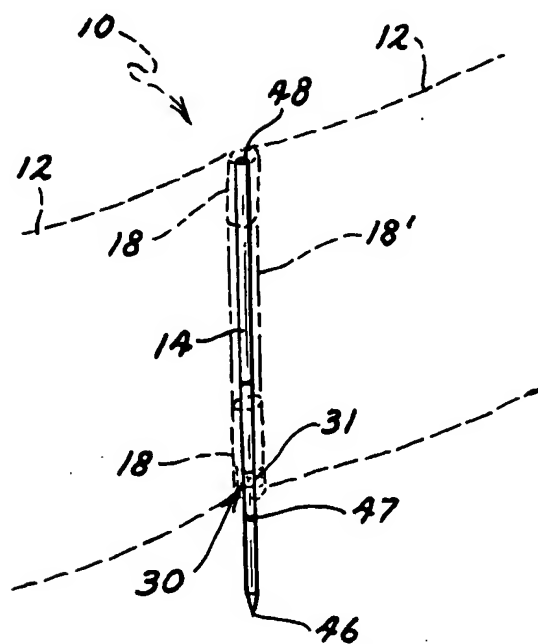


FIG. 6

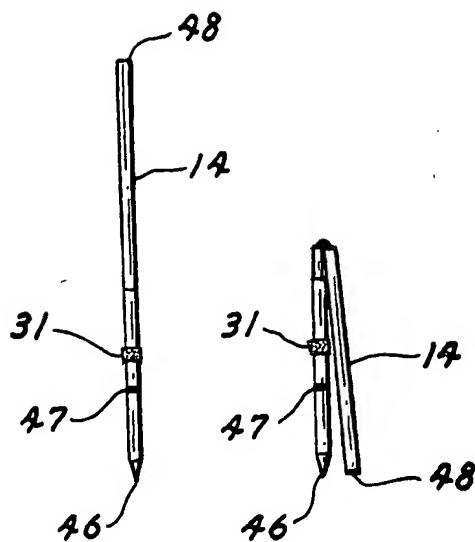


FIG. 7

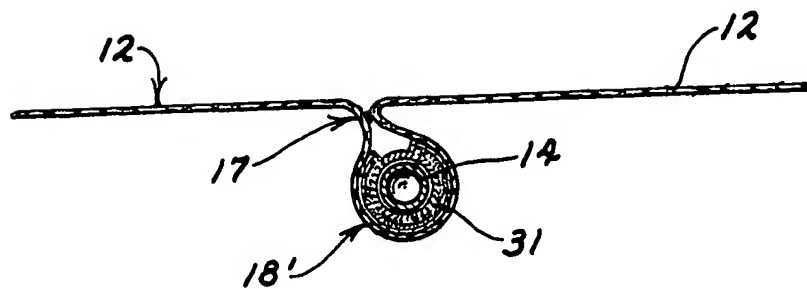


FIG. 8

1

PORTABLE ENVIRONMENTAL BARRIER APPARATUS

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of priority pursuant to 35 USC §119(e)(1) from the provisional patent applications filed pursuant to 35 USC §111(b): as Ser. No. 60/037,876 on Feb. 10, 1997, and as Ser. No. 60/045,368 on May 02, 1997.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The field of the present invention relates generally to improvements in portable environmental barriers, and more particularly to a portable screen that can be easily carried by a user in a compact backpack configuration. Portable screen barriers are particularly useful in outdoor environments to provide protection from blowing dirt, sand, and other debris. When used as a wind barrier, these devices are especially useful in beach environments, where wind blown sand and other debris may be a nuisance. Alternative uses for the portable environmental barrier of the present invention include a child or pet restraint enclosure, a privacy barrier, and a temporary equipment and personal effect storage site.

2. Brief Discussion of the Prior Art

The use of portable screen apparatuses in various environments is known in the prior art. In an outdoor environment, the use of environmental screens is desirable to prevent wind-blown dirt, sand, and other debris from contacting the user thereof or otherwise being deposited on or near the user. Additionally, environmental screens may desirably provide a degree of privacy to a user or group of users. Prior art environmental screens may be large fixed screens typically in the form of walls or fences. While such fixed screens are effective in providing protection against the wind and blowing objects, they are of course expensive, stationary structures which are impossible to transport. As a result, for those who find themselves outdoors on windy days either move to the shelter of a fixed wind fence or else suffer the discomfort and inconvenience of wind and blowing dirt and sand.

Prior art portable environmental screens are generally multiple paneled screens vertically supported by poles inserted into the soil. U.S. Pat. No. 4,778,090 to Facchina discloses a portable barrier device which can be carried as a "back pack." The Facchina device simply includes a pair of straps attached to a body panel that can be used to position the device on the back of the user. No detachable back pack portion is disclosed as being separable from the wind barrier panels in Facchina.

BRIEF SUMMARY OF THE INVENTION

The present invention specifically addresses the above mentioned deficiencies of the prior art wind screens. More particularly, and in illustrated embodiments, the present invention is a portable environmental barrier for outdoor use which can be stowed and user-carried within a "back pack" or similar appliance. The environmental barrier of the present invention may easily be carried by a user when packaged in a non-functional configuration within the back pack, and deployed in a functional configuration to adequately protect the user from blowing grass, sand, and other debris. Additional uses for the present invention include a child or pet restraint enclosure and a privacy screen. Still another use for the present invention is as an

enclosure for equipment and personal effects for members of a team participation event. A banner or other indicia may be associated with separate enclosures of the present invention to identify particular teams, groups, etc. Advantageously, the portable barrier of the present invention can be quickly erected for use in a wide variety of outdoor settings, e.g., beaches, sporting events, picnic areas, camping sites, etc. The portable environmental barrier includes a plurality of rectangular barrier panel members, which preferably may be formed from a single sheet of light weight fabric or other flexible material. The barrier panel members are supported in a generally vertical plane by support members which are secured at intervals along the length of the environmental barrier. The support members may be multi-part poles which may be deployed from a collapsed storage orientation. Still another aspect of the present invention provides that the barrier panel members, when transported or stored, may be folded or otherwise accumulated for user transport within a backpack. The back pack portion may be separable from the environmental barrier device to allow individual use once the environmental barrier is erected. The back pack portion may include a plurality of pockets or enclosures for user storage. Still another aspect of the present invention provides accessory enclosure panels which may be attached to the erected environmental barrier to form a substantially enclosed region for additional privacy, protection from the sun, or storage of personal effects and the like.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is perspective view of a deployed environmental barrier according to the present invention;

FIG. 2 is a side elevational view of an environmental barrier according to the present invention shown in an alternative deployed configuration;

FIG. 3 is a partial top plan view of the environmental barrier of FIGS. 1 and 2;

FIG. 4 is a perspective view of the environmental barrier of FIGS. 1 and 2, shown in the transport orientation within the backpack portion;

FIG. 5 is a perspective view of the environmental barrier of FIGS. 1 and 2, shown in the transport orientation within the backpack portion;

FIG. 6 is a partial perspective view of the environmental barrier of FIG. 2;

FIG. 7 is a side elevational view of the pole supports of the present invention; and

FIG. 8 is a cross sectional view of the environmental barrier of FIG. 2, taken along lines 8—8.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the drawings in detail, the numeral 10 designates the environmental barrier device as a whole. The environmental barrier device 10 is illustrated in deployed orientations in FIGS. 1 and 2, and in un-deployed, non-functional storage and transport orientation in FIGS. 4 and 5. As best illustrated in FIG. 1, the environmental barrier 10 includes a plurality of flexible barrier panel members 12 which are supported in generally vertical planes by pole members 14, shown here as collapsible pole members 14. Device 10 further includes a back pack device 16 or similar user back-mounted appliance which is adapted to contain the plurality of barrier panel members 12 and pole members 14. Back pack device 16, as illustrated in FIG. 2, may also be supported by poles 14 in an upright manner. Alternatively

3

back pack device 16 may be detached from the environmental barrier structure 10 and separably utilized. Environmental barrier 10 may be erected upon sand and other soil types in a variety of functional configurations. For instance, the environmental barrier 10 shown in FIG. 1 has been erected to enclose an area within the environmental barrier 10. Such a configuration may be desired to provide a degree of privacy to the user or provide a safety enclosure for children or pets. The deployed configuration of the barrier 10 of FIG. 1 may also be used as an equipment deposit site or team gathering location for outdoor team events. Alternatively with reference to FIG. 2, the environmental barrier 10 may be linearly erected, i.e. used as a wind fence structure.

Referring to FIGS. 1 and 2, environmental barrier 10 is illustrated in deployed functional orientations. Individual barrier panel members 12 may be manufactured from flexible material or fabric alternatives. In one embodiment, a single length of rip-stop nylon may be used as the barrier panel members 12. Barrier panel members 12 are supported at either end by poles 14 which interact with support structures 18. In the illustrated embodiments, support structures 18 are sleeves being orthogonally aligned relative to the longitudinal extent of each barrier panel member 12. Referring to FIGS. 2 and 8, individual support structures 18' may alternatively be formed by a pinch and sew procedure 17 to form a light fitting sleeve 18' for the poles 14 to slide through and support the barrier panel members 12. Furthermore, it is appreciated that support structures 18 may be formed in a variety of manners so that the barrier panel members 12 can be supported by poles 14. For instance, the poles 14 may be received through elongated sleeves 18' that span the height of the barrier panel members 12. As still further examples, support structure 18 may include loops through which poles 14 may be threaded, hook and loop fastener loops or tabs, and other securing structure for temporarily maintaining contact between a pole 14 and a barrier panel member 12. As a result, a variety of pole 14/barrier panel member 12 support interface techniques are appreciated by those skilled in the art.

Still referring to FIGS. 1 and 2, device 10 of the present invention includes a detachable backpack member 16. Backpack 16 includes a body 20 having an interior region 22 and a strap structure 24 for securing the device 10 to a user. Referring again to FIGS. 4 and 5, the interior region 22 of the backpack 16 is sized to receive the undeployed plurality of barrier panel members 12 and support poles 14. Backpack member 16 is temporarily attached to the barrier panel member 12 by securement structure 26, which may be a zipper, buttons, a hook and loop type fastening system, or other known fastening structure. The backpack member 16 may be detached from the barrier structure 12 and separably utilized for carrying or storage purposes. Alternatively, as illustrated in FIG. 2, the backpack member 16 may remain secured to the barrier panel members 12 and be supported in an upright manner by a pole support 14 and support structure 18. As a result, the supported backpack member 16 performs the additional role of a barrier panel. Still additionally the backpack member 16 may include pockets or insulated regions 28 for storage of food, personal effects, or accessories which are readily accessible to the user within the barrier 10 enclosure.

Referring now to FIGS. 2, 6, and 8, the device 10 further includes a plurality of fastening structure 30 for temporarily securing the barrier panel members 12 to the poles 14. The fastening structure 30, which facilitates maintaining the barrier panel members 12 upon the pole 14 during use, may be a hook and loop fastener 31 affixed to the pole 14 and an

inner surface of the sleeve 18. Alternatively, the fastening structure 30 may include a small hook fastened to the pole 14 and engaging the barrier panel member 12 near its lower edge (not shown). Other types of fastening structure 30 may be appreciated by those skilled in the art.

Referring now to FIG. 7, a pair of poles 14 are shown, illustrating the functional and non-functional configurations for the poles 14. Poles 14 are collapsible two-part poles 14 as well known in the art. Each pole member 14 has a sharpened end 46 for soil penetration and a blunt end 48 for applying a downward penetrating force. As shown in FIGS. 2, 6, and 7, each pole member 14 may include a depth indicia 47 for indicating to the assembler the desired depth to which the pole 14 is inserted into the soil. Depth indicia 47 may be a line marking on the pole 14, an O-ring secured to the pole, or any other visible marking(s). In an illustrated embodiment, depth indicia 47 is spaced approximately 8 inches away from a sharpened end 46 of a pole 14. Other multiple-part poles 14 may be practicable. Furthermore, a variety of pole configurations and materials of construction may be selected.

Referring to FIG. 4 and 5, the barrier device 10 is illustrated in its non-functional storage and transport configuration contained within the backpack 16. Poles 14 may be retained within a plurality of pockets 34 in the interior region 22 of the backpack 16. Backpack 16 includes additional pockets 36 which may be used for accessory storage. It is readily appreciated that backpack 16 is user supported through strap structure 24. The backpack 16 includes a sealing structure 38 for enclosing the barriers 12 within the backpack 16. The sealing structure 38 may be a zipper, buttons, a hook and loop structure, or other known sealing devices.

Referring again to FIG. 1, another aspect of the present invention includes an accessory enclosure structure 50 providing a substantially enclosed region 52 for additional user privacy or protection. In one embodiment, accessory enclosure structure 50 may include a top, generally triangularly-formed panel 54 and a side panel 56 having an opening 58 for the user, both panels 54,56 being supported by a support pole 14. In the embodiment illustrated in FIG. 1, the accessory enclosure panels 54,56 are temporarily secured at a corner of the erected barrier panel members 12. The accessory enclosure panels may be secured to the barrier panel members 12 in a variety of known manners, e.g., zippers, buttons, hook and loop fasteners, etc. Alternative attachable accessory enclosure structures 50 are readily appreciated by those skilled in the art.

In operation, the user may transport the device 10 in the non-functional orientation within the backpack 16 to an outdoor location. When desired the user releases the environmental barrier device 10 by opening the sealing structure 38 and un-rolling the plurality of barrier panels 12. The poles 14 are then extended or otherwise manipulated to length and individually inserted into the support structures 18 of the barrier panel members 12. The securement devices 30 are then fastened to maintain the barrier panel members 12 to the poles 14. The device 10 may then be erected in a variety of configurations, i.e., as an enclosure of FIG. 1, a fence illustrated in FIG. 2, etc., by inserting the sharpened portion 46 of the poles 14 into the soil a desired locations to a proper depth indicated by the pole depth indicia 47. The accessory enclosure structure 50 may next be erected by attaching the enclosure structure 50 at a corner of the plurality barrier panels 12. User access to the interior region 52 of the enclosure structure may be made through the opening 58 in the side panel 56. If desired, the user may support the back

pack 16 with one or more poles 14 in a generally upright manner to form an additional wind barrier section and facilitate user access to the pockets 28 within the backpack 16. Alternatively, once the barrier panel members 12 are erected, the user may detach the backpack 16 from the barrier panel members 12 and separately use the backpack 16 for storage or transport or other use. Upon departure from the outdoor location the user may collapse the device 10, remove the poles 14 from the sleeves 18, fold or otherwise accumulate the plurality of barrier panel members 12, place the collapsed poles 14 in the inner pockets 34 of the backpack 16, and enclose the barrier panel members 12 within the backpack 16 with sealing structure 38.

It is understood that the exemplary portable environmental barrier 10 described herein and shown in the drawings represents only a presently preferred embodiment of the invention. Indeed, various modifications and additions may be made to such embodiment without departing from the spirit and scope of the invention. Thus, these and other modifications and additions may be obvious to those skilled in the art and may be implemented to adapt the present invention for use in a variety of different applications.

What is claimed is:

1. A user portable environmental barrier apparatus, said apparatus comprising:

- a plurality of flexible barrier panel members, each of said barrier panel members being attached to at least one other of said barrier panel members; each of said plurality of flexible barrier panel members further having a pair of associated support structures;
- a plurality of ground penetrable pole members for respectively engaging one of the pair of the support structures and supporting said plurality of flexible barrier panel members in an upright deployed configuration;
- a back pack structure including a body, an interior region, and a strap structure for supporting the back pack structure on the user; and
- securement structure for detachably securing the back pack structure to at least one of the plurality of flexible barrier panel members, said backpack structure being detachable from said at least one of the plurality of barrier panel members so that the backpack structure may be independently utilized away from the barrier panel members.

2. The apparatus of claim 1, wherein the interior region of the back pack structure is sized to receive the plurality of flexible barrier panel members.

3. The apparatus according to claim 1, wherein one or more of the plurality of pole members is individually collapsible to a reduced height, and wherein the interior region of the back pack structure is sized to receive the plurality of collapsed pole members.

4. The apparatus according to claim 1, further comprising:

- a plurality of fastening structures disposed near a lower edge of the plurality of barrier panel members for temporarily affixing the plurality of barrier panel members to the plurality of pole members.

5. The apparatus according to claim 1, wherein the support structures are disposed between adjacent pairs of barrier panel members, wherein the support structures are cylindrical in form and include a top sleeve and a bottom sleeve, said top sleeve and bottom sleeve being sized to receive at least a portion of one of the pole members.

6. The apparatus according to claim 1, wherein the plurality of flexible barrier panel members are formed from a single sheet of fabric.

7. The apparatus according to claim 1, wherein the back pack structure further includes a support structure for receiving a ground penetrable pole member, said support structure and an associated pole member capable of supporting the back pack structure in a generally upright manner.

8. The apparatus according to claim 1, wherein the securement structure is a zipper.

9. The apparatus according to claim 1, wherein the back pack structure further includes a sealing structure for substantially enclosing the interior region thereof from access.

10. The apparatus according to claim 1, further comprising:

- an accessory enclosure structure formed of flexible panels and attachable to the plurality of flexible barrier panel members, said enclosure structure defining a substantially enclosed region when attached to the plurality of flexible barrier panel members.

11. A user portable environmental barrier apparatus, said apparatus comprising:

- a connected plurality of flexible barrier panel members, each of said plurality of flexible barrier panel member having a pair of support structures;
- a plurality of ground penetrable poles for respectively engaging one of the pair of said support structures of said barrier panel members and maintaining said barrier panel members in an upright deployed orientation;
- a back pack appliance including a body, an interior region, and a strap structure, said back pack appliance being adapted to be supported on the user through said strap structure, said interior region sized to receive the connected plurality of flexible barrier panel members in an undeployed state; and

securement structure for detachably securing the back pack appliance to at least one of the plurality of barrier panel members, said back pack appliance adapted to be detachable from and independently utilizable away from the plurality of flexible barrier panel members.

12. The apparatus according to claim 11, wherein the plurality of poles are individually collapsible to a reduced height, and wherein the interior region of the back pack appliance is sized to received the plurality of collapsed poles.

13. The apparatus according to claim 11, further comprising:

- a plurality of fastening structures disposed near a lower edge of the plurality of barrier panel members for temporarily affixing the plurality of barrier panel members to the plurality of poles.

14. The apparatus according to claim 11, wherein the support structures are disposed between adjacent pairs of barrier panel members.

15. The apparatus according to claim 11, wherein the plurality of flexible barrier panel members are formed from a single sheet of fabric.

16. The apparatus according to claim 11, wherein the back pack structure further includes a support structure for receiving a ground penetrable pole, said support structure and an associated pole capable of supporting the back pack appliance in a generally upright manner.

17. The apparatus according to claim 11, wherein the securement structure is a zipper.

18. The apparatus according to claim 11, wherein the back pack appliance further includes a sealing structure for substantially enclosing the interior region thereof from access.

19. The apparatus according to claim 11, further comprising:

7

an accessory enclosure structure formed of flexible panels and attachable to the plurality of flexible barrier panel members, said enclosure structure defining a substantially enclosed region when attached to the plurality of flexible barrier panel members.

20. The apparatus according to claim 19, wherein the accessory enclosure structure includes a generally triangu-

8

larly shaped top panel and a side panel having an opening for user access, wherein said top panel and said side panel may be secured to a corner portion of an enclosure defined by a deployed plurality of flexible barrier panel members.

* * * * *

United States Patent [19] Gatling

[11] Patent Number: **5,927,575**
[45] Date of Patent: **Jul. 27, 1999**

[54] **SPORTSMAN'S CUSHION AND BACKPACK**

[76] Inventor: **William D. Gatling**, 3545 Wesley Dr.,
Waycross, Ga. 31503

[21] Appl. No.: **09/112,309**

[22] Filed: **Jul. 9, 1998**

[51] Int. Cl.⁶ **A45F 4/02**

[52] U.S. Cl. **224/153; 224/155; 224/580;**
224/582; 224/583; 224/584; 224/600; 224/642

[58] Field of Search **224/153, 155,**
224/579, 580, 582, 583, 584, 586, 600,
627, 637, 638, 639, 642, 644, 646; 190/8,
12 A; 383/4; 297/219.1, 219.12, 228.12,
250.1

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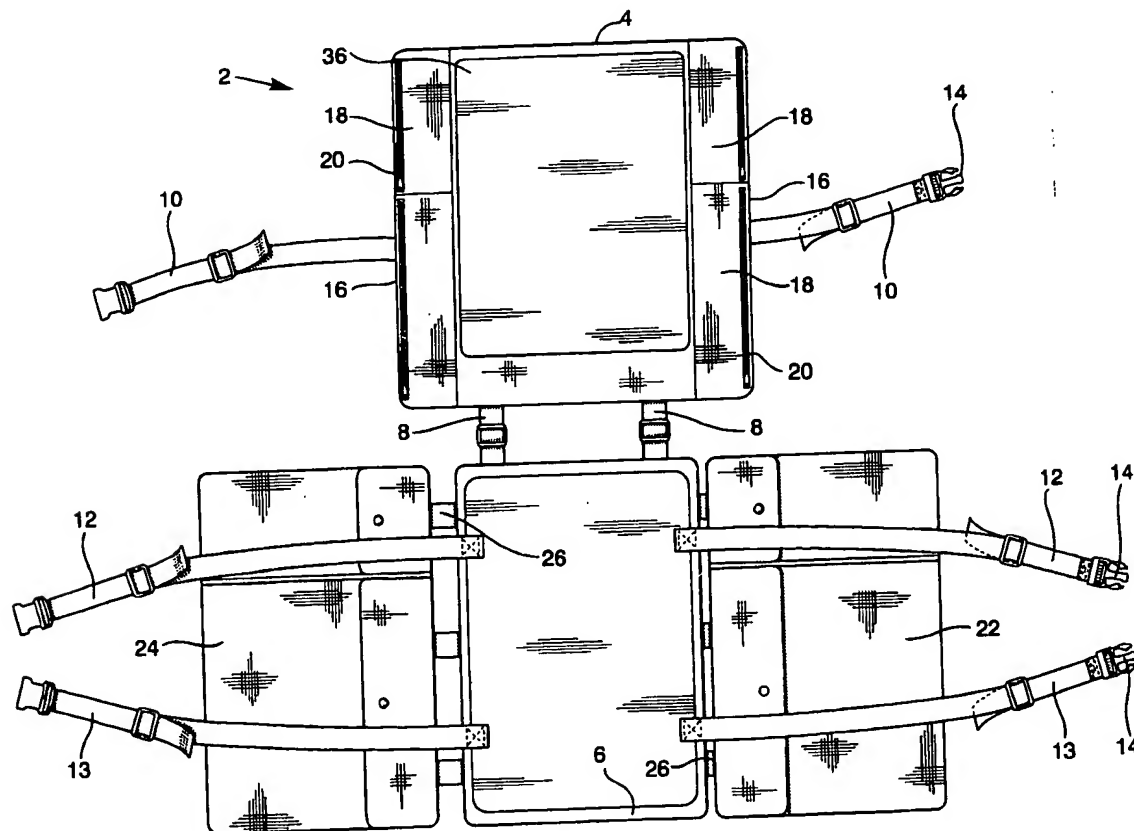
Primary Examiner—Allan N. Shoap
Assistant Examiner—Maerena W. Brevard
Attorney, Agent, or Firm—Brian D. Bellamy

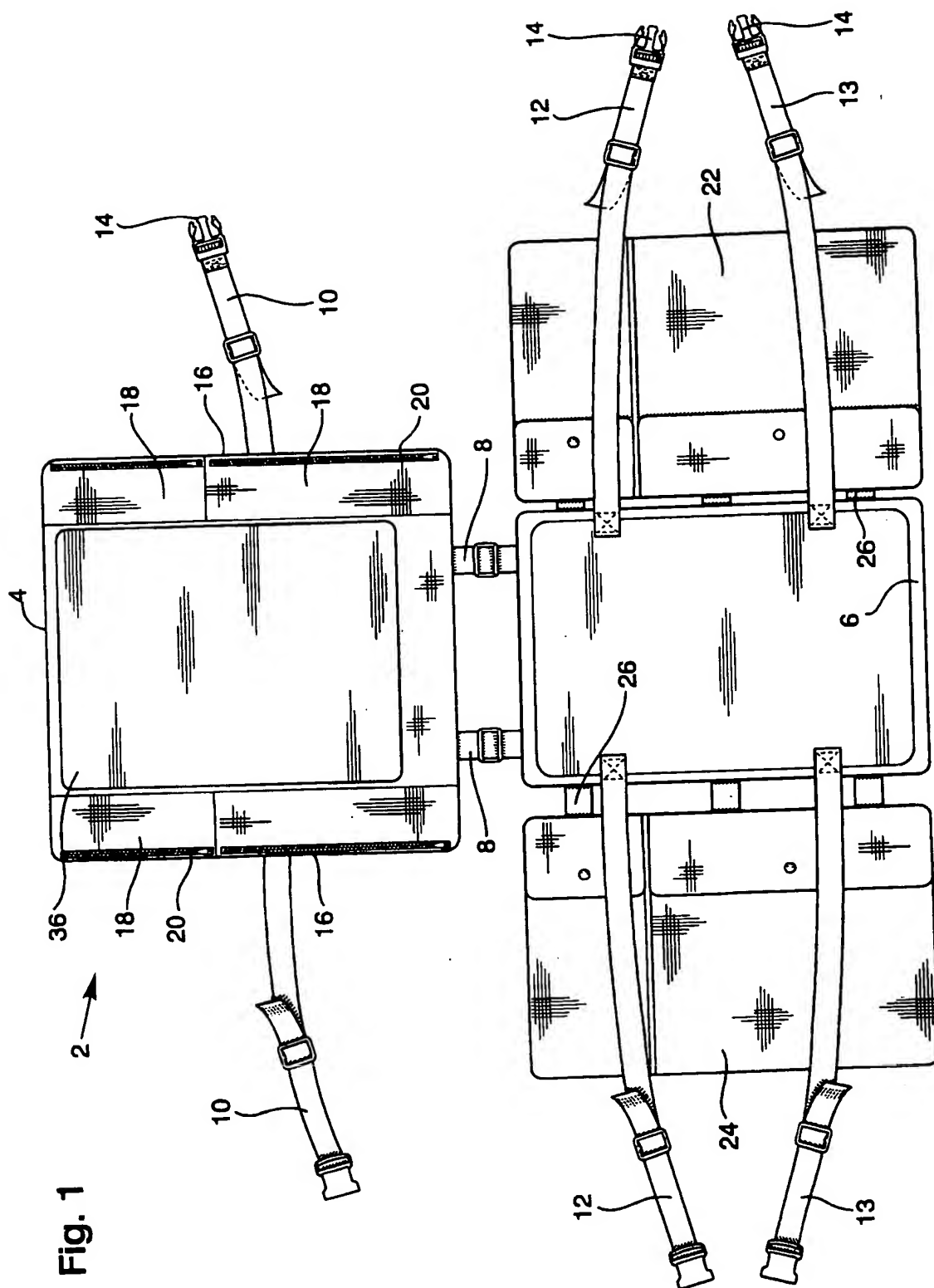
[57]

ABSTRACT

The invention provides a cushion and backpack combination including a back support cushion and seat support cushion that are connected by a pair of shoulder straps. Both the back cushion and seat cushion include additional straps for securing the cushions to an object. The back cushion includes integrated pockets, and the seat cushion has detachably appended packs on each side. The appended packs are folded over onto the seat cushion and then tied onto the seat cushion using the securing straps to form a single backpack unit. By placing the carrying straps over each shoulder, the sportsman may carry both the cushions and the packs.

5 Claims, 5 Drawing Sheets





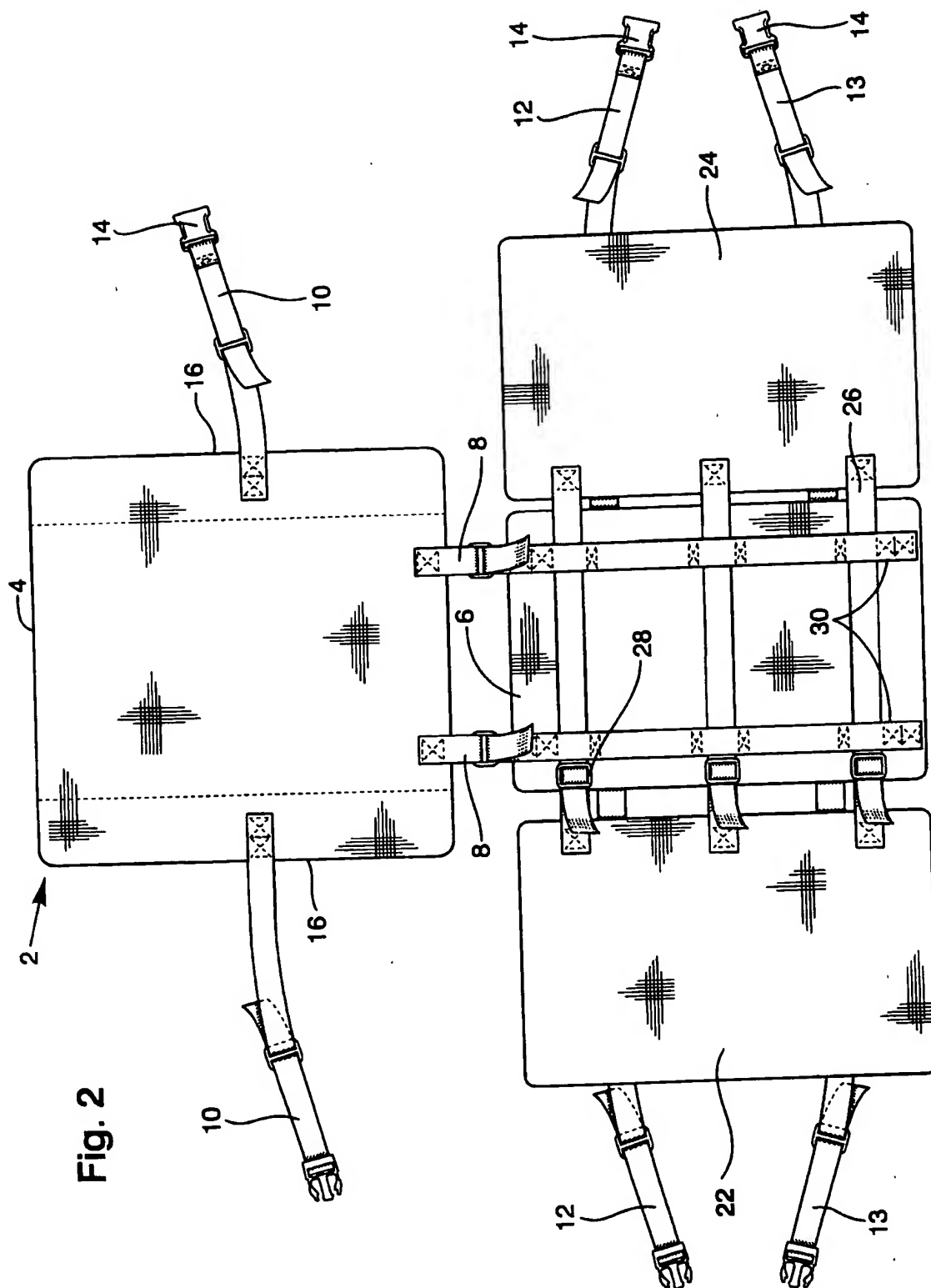


Fig. 2

Fig. 3

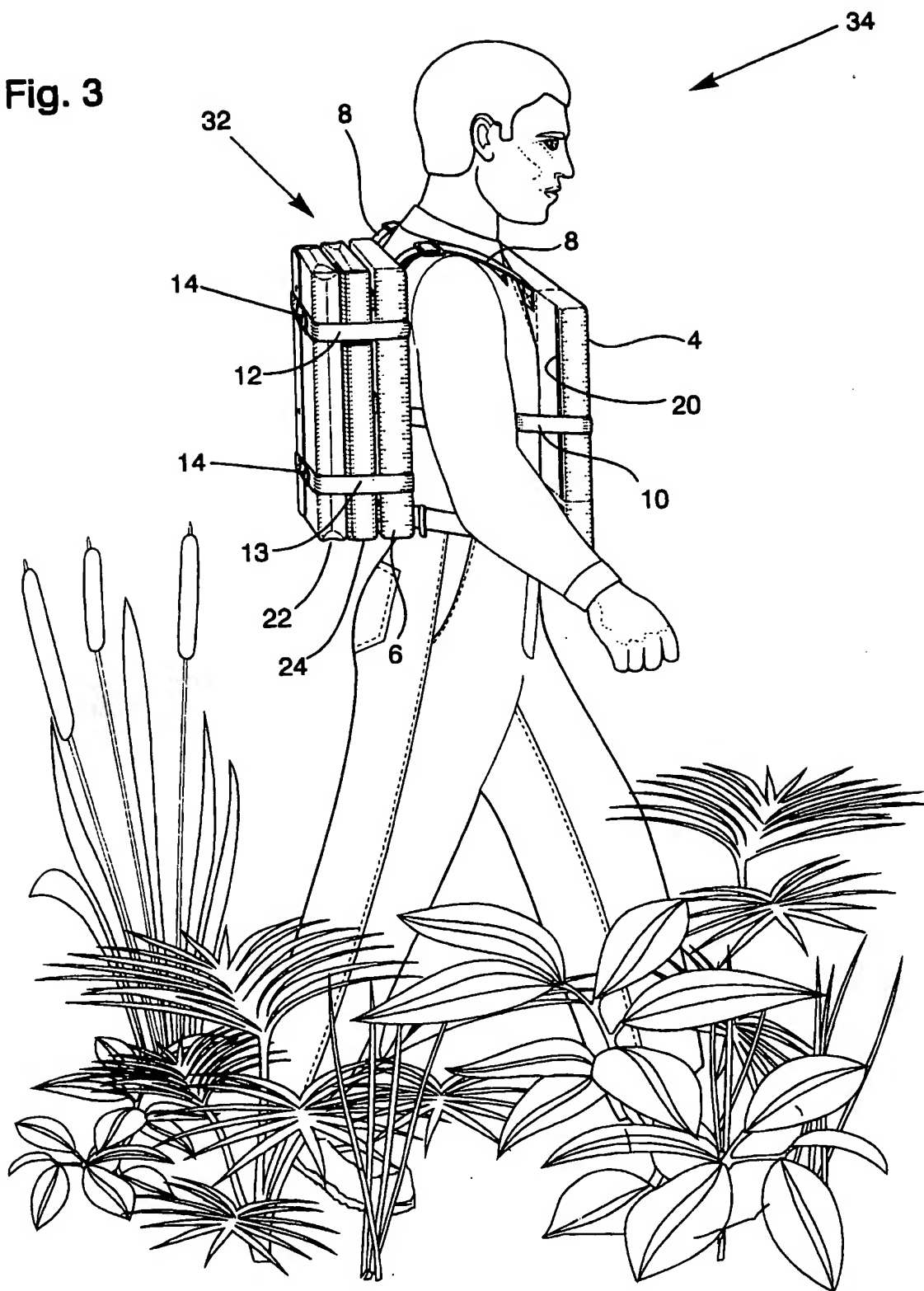
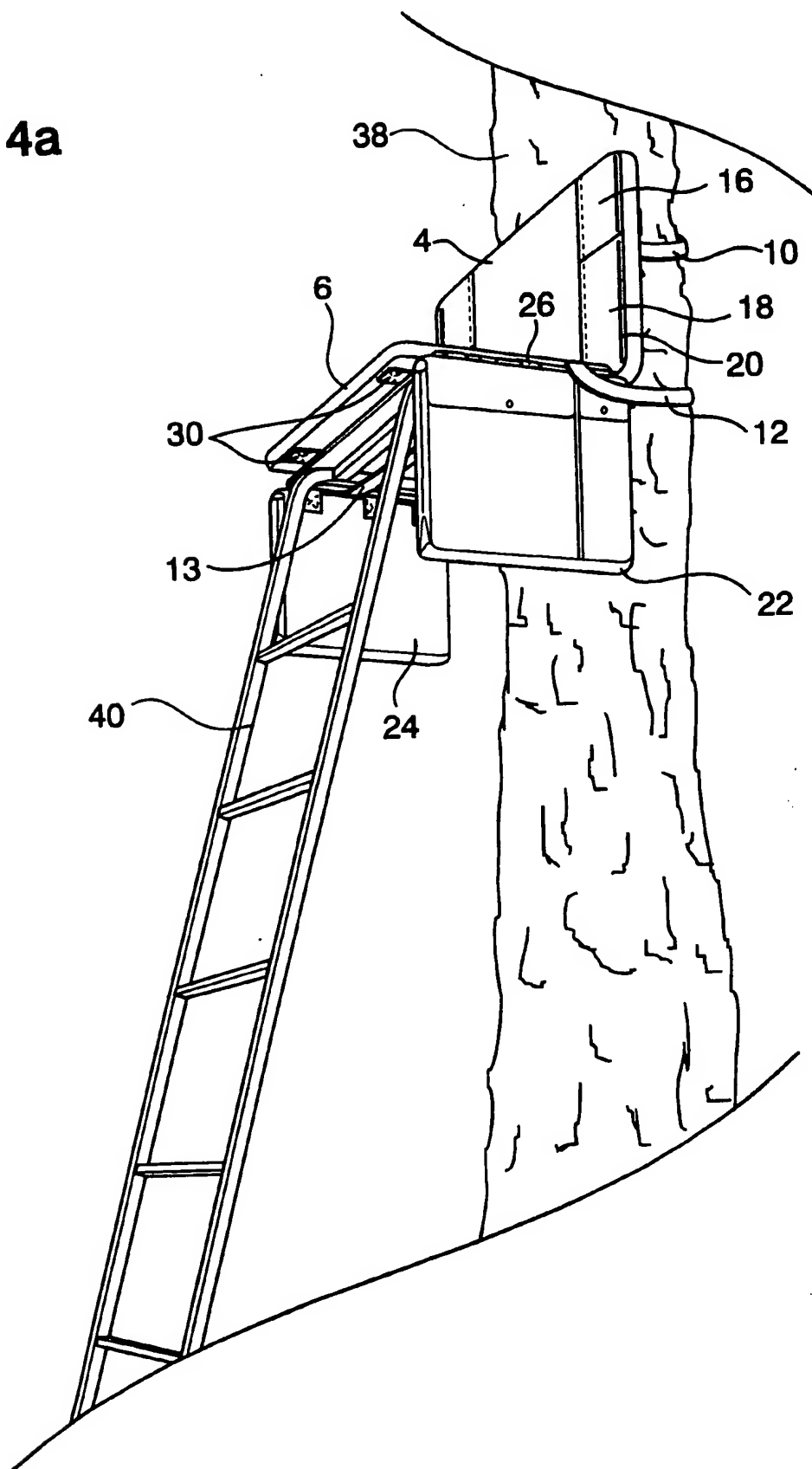
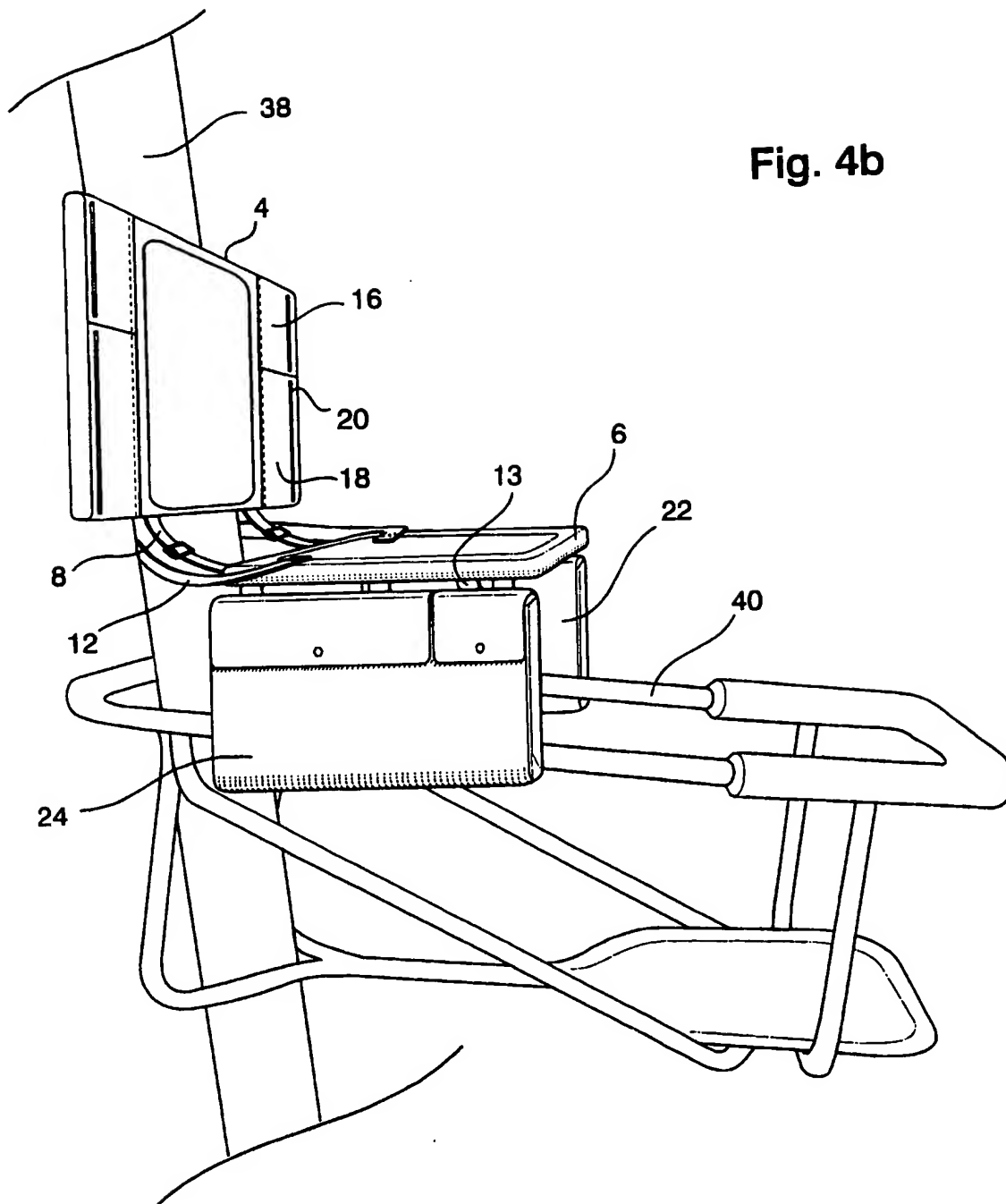


Fig. 4a





SPORTSMAN'S CUSHION AND BACKPACK

INTRODUCTION

The present application relates to a cushion for supporting a hunter's back and buttocks and a supply pouch for carrying hunting supplies, and more particularly to a cushion and supply pouch combination adapted for convenient carriage as a backpack and further adapted for convenient use as a seat cushion in hunter's tree stands, and the like as needed by persons while hunting.

BACKGROUND OF THE INVENTION

Sportsmen, including hunters, carry many supplies while hunting including such items as a rifle, shotgun, bow, ammunition, bug spray, flashlight, game scents and calls, gloves, extra clothing, food, blanket, etc. Further, sportsmen often desire to carry a cushion to use when resting or when sitting on a stand or against a tree. Therefore, portable cushions and carrying packs are often used in the field by sportsmen to improve the comfort and convenience of the hunting experience. When desiring to include all of the items needed for a comfortable hunting experience, sportsmen often find themselves burdened by the chore of carrying the assortment of items. Often, sportsmen will carry a large backpack to store the needed equipment. However, these known backpacks are not adapted for convenient use in hunting stands in combination with a cushion device.

A combination cushion and carrying assembly is shown in U.S. Pat. No. 4,190,918. From a review of this patent, it is seen that the carrying assembly is carried by hand and the cushion device is adapted for use in stadium type seats. For hunting it is desirable to carry the pack on one's back to free up the hands for carrying armaments, game, and other items unable to fit into a pack. Further, combination cushion and packing devices like that in U.S. Pat. No. 4,190,918 have not met the need for a cushion and pack that is versatile enough to be conveniently used in locations such as various types of hunting stands. There exists a need for such a device in that sportsmen will sometimes suffer back injury and discomfort from sitting in stands and trees without cushioning and also by trying to access a backpack that is required to be kept remote from the location of a hunter in a stand or tree.

SUMMARY OF INVENTION

The present invention provides a cushion and backpack combination for use by sportsmen when hunting that includes a back cushion and seat cushion that are connected by a pair of shoulder straps. Both the back cushion and seat cushion include additional straps for securing the cushions to a stand, tree, or similar structure. The back cushion includes integrated zip pockets or pouches on each side, and the seat cushion has detachably appended packs on each side. The invention is arranged as a backpack for carrying by folding the appended packs over onto the seat cushion and then tying the packs onto the seat cushion using the securing straps to form a single backpack unit. By placing the carrying straps over each shoulder, the sportsman may conveniently carry both the cushions and the packs.

Accordingly, one object of the present invention is to provide a combination cushion and carrying pack for use by sportsmen, including hunters. Another object of the invention is to provide a seat and back cushion for use by sportsmen while sitting in stands and trees. A further object is to provide such a construction of the combination cushions and packs that the apparatus may be conveniently

carried as a compact backpack unit. Yet another object is to provide convenient storage and access for items needed by a sportsman while sitting in a stand or the like. These and other objects and advantages of the present invention will become apparent to those persons skilled in the art from a study of the drawings and from a review of the following detailed description of a preferred embodiment of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be further described in connection with the accompanying drawings, in which:

FIG. 1 is a plan view of the front side of the cushion and backpack combination of the present invention in an extended position.

FIG. 2 is a plan view of the back side of the present invention in an extended position.

FIG. 3 is a perspective view of the cushion and backpack combination of the present invention in a folded condition as carried over the shoulders of a sportsman.

FIG. 4A is a perspective view of the present invention illustrating its use as a seat and backrest in a ladder type tree stand.

FIG. 4B is a perspective view of the present invention illustrating its use as a seat and backrest in a tree climber stand.

DETAILED DESCRIPTION

Referring to FIG. 1, a preferred embodiment of the invention is shown. A cushion and backpack combination 2 is shown having a back support cushion 4 and a seat support cushion 6. Each of the cushions comprise a filling of foam or other suitably soft and supportive material contained within a shell of canvass or other suitable covering material of fabric or suitable material. The outer shell may include a camouflage design especially suited for hunting. The back support cushion 4 and seat support cushion 6 are connected together by shoulder strap means such as the shoulder straps 8 shown in FIG. 1. The shoulder straps 8 are of sufficient length to permit placement of the shoulder straps over a person's head for carrying the cushions 4 and 6. Alternatively, the shoulder straps 8 may be made adjustable in length. Each cushion 4 and 6 has attached thereto additional securing means. A first securing means is comprised of a first strap 10 attached to the back support cushion 4, and a second securing means is comprised second securing strap 12 and third securing strap 13 attached to the seat support cushion 6. The first and second securing means are used for securing the cushions 4 and 6 to the location where a person will sit. Snap buckles 14 or similar connecting device can be used on the first, second, and third securing straps 10, 12, and 13 for connecting and tightening the straps to an object.

The cushion and backpack combination 2 of the present invention includes a plurality storage pockets 16 on the back support cushion 4. These storage pockets 16 may be integrated into the back support cushion 4 and may include several compartments 18 as well as include zippers, snaps, buttons, Velcro, or similar means 20 for opening and closing the pockets. The combination 2 further includes one or more removable packs. As illustrated in FIGS. 1 and 2, a first pack 22 and a second pack 24 are attached on each side of the seat support cushion 6. In the embodiment of the invention shown in FIGS. 1 and 2, the removable packs 22 and 24 are attached by strap links 26 having a snap buckle 28 or the like between the links and the second pack 24 to permit detach-

3

ment of the packs 22 and 24 from the seat support cushion 6. In this preferred embodiment, the strap links 26 are held onto the seat support cushion 6 by cross straps 30. Other various means including snaps and Velcro may be used for attaching the packs 22 and 24 individually such that they may be removed from the seat support cushion 6, thereby accomplishing the desired objectives. The strap links 26 provide a convenient means for attaching the removable packs 22 and 24 while allowing the removable packs to be easily folded onto the top of the seat support cushion 6 for use as a backpack as shown in FIG. 3.

In order to convert the cushion and backpack combination 2 into a backpack, removable packs 22 and 24 are folded onto the seat support cushion 6 to form a single combined unit 32 that is strapped tightly together using the second means, second and third straps 12 and 13. Using the shoulder straps 8 to support the cushion and backpack combination 2 on his shoulders, the sportsman 34 rests the combined unit 32 on his back while the back support cushion 4 with integrated pockets 16 rests on the sportsman's chest. The first securing means, first strap 10, may be wrapped around the sportsman's waist to secure the cushion and backpack combination 2 to his body for carrying. Further, the exposed side of the back support cushion 4 may be covered with a bright colored reflective material 36 for safety while walking through underbrush near other hunters carrying armaments. Likewise, the exposed side of the combined unit 32 may be provided bright colored reflective material as an additional safety feature.

In use as a cushion and seat, the cushion and backpack combination 2 is shown in FIGS. 4A and 4B. In each Figure a stand 40 is shown each being of a different variety. In FIG. 4A, the stand 40 is a ladder type tree stand like that hunters often use in hunting deer. In FIG. 4B, the stand 40 is a climber type tree stand also commonly used by hunters. The present invention is especially adapted to be used on any of the known type of hunting stands. The detachable packs 22 and 24 may be removed from the seat cushion 6 so that the packs and straps do not interfere with securing the cushion 6 on a particular stand.

In FIGS. 4A and 4B the invention is disposed on a tree trunk 38 and the stand 40. Thereby, the back support cushion 4 is placed in a vertical upright position against the tree trunk 38 by wrapping the first securing means, first strap 10, about the tree trunk and tightening. Further, the seat support cushion 6 is placed in a horizontal flat position on the stand 40, and the seat support cushion 6 is secured to the stand 40 by wrapping the second securing means, second and third straps 12 and 13, about the stand 40 and tightening. It is an important aspect of this invention that the removable packs 22 and 24 are readily accessible by the user when sitting on the cushion and seat arrangement shown in FIG. 4. Consequently, the sportsman 34 may pack his or her gear into the integrated pockets 16 and the removable packs 22 and 24 before beginning his or her outing, and he or she will be able to conveniently carry the gear along with cushions and armaments for hunting without the task becoming a burdensome chore.

It is appreciated from the foregoing specification that the present invention entails a generally simple and relatively inexpensive cushion and backpack combination 2 that not

only serves as a cushion when used as suggested in FIG. 4, but has the added utility of being designed to convert to a backpack to carry gear and supplies that are often desired and needed in conjunction with a hunting excursion in which a cushioned seat and backrest may be desired. Therefore, the present invention serves a multipurpose and is particularly adapted and suitable for use by the sportsman or hunter that sits in hunting stands or the like while hunting, or rests against a tree while hiking, or any similar type of situation in which a cushion and a backpack would be desired.

While preferred embodiments of the invention have been shown and described, those skilled in this art will recognize that various modifications may be made in these embodiments without departing from the spirit and scope of the present invention. Therefore, the scope of the present invention is set forth in the claims that follow.

What is claimed is:

1. A combination cushion and backpack apparatus comprising:

- a back support cushion;
- a seat support cushion;
- a shoulder strap means for connecting the back support cushion and seat support cushion such that the apparatus may be carried over a person's shoulders;
- a plurality of pockets for storage of supplies attached to the back support cushion;
- one or more packs for storage of supplies attached to each side of the seat support cushion;
- a first securing means attached to the back support cushion for securing the back support cushion to an object or person;
- a second securing means attached to the seat support cushion for securing the seat support cushion to an object or for securing the packs to the seat support cushion.

2. A combination cushion and backpack apparatus as claimed in claim 1 that includes a brightly colored reflective material on said back support cushion and said seat support cushion.

3. A combination cushion and backpack apparatus as claimed in claim 1 in which said packs are detachable from the seat support cushion.

4. A combination cushion and backpack apparatus as claimed in claim 1 in which said shoulder strap means includes a pair of straps that are adjustable in length.

5. A combination cushion and backpack apparatus as claimed in claim 1 in which said first securing means includes a first strap attached to said back support cushion and having a means for connecting the ends of the first strap such that the first strap may be tightened about an object; said second securing means includes a second strap attached to said seat support cushion and having a means for connecting the ends of the second strap such that the second strap may be tightened about an object; said second securing means further including a third strap attached to said seat support cushion and having a means for connecting the ends of the third strap such that the third strap may be tightened about an object.

* * * * *

United States Patent [19]

Guerra

[11] Patent Number: 6,021,794
[45] Date of Patent: Feb. 8, 2000

[54] PORTABLE COLLAPSIBLE SHELTER

[76] Inventor: Jose Inez Guerra, 11130 9 3/4 Ave.,
Hanford, Calif. 93230

[21] Appl. No.: 09/234,694

[22] Filed: Jan. 21, 1999

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[52] U.S. Cl. 135/95; 135/87; 135/90;
135/96; 135/121; 135/904; 135/901; 224/153;
224/154; 224/155; 224/156

[58] Field of Search 52/2.22, 2.23;
135/90, 95, 96, 121, 127, 904; 224/153,
154, 155, 156

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Primary Examiner—Carl D. Friedman
Assistant Examiner—Jennifer I. Thissell

[57] ABSTRACT

A portable shelter is provided including a frame having a base and a collapsible upper portion. A cover is removably mounted on the upper portion of the frame. A pair of shoulder straps are each coupled to the base of the frame for allowing the same to be worn on a back of a user. Next provided is a bag mounted on the base for receiving the cover.

14 Claims, 3 Drawing Sheets

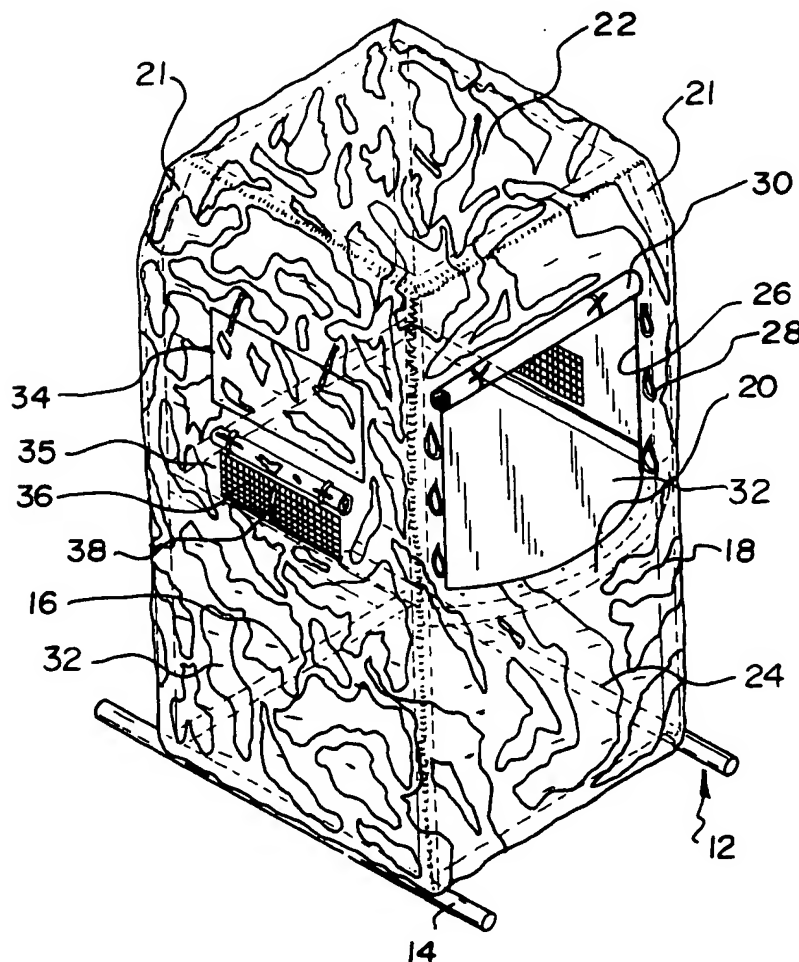


Fig. 1

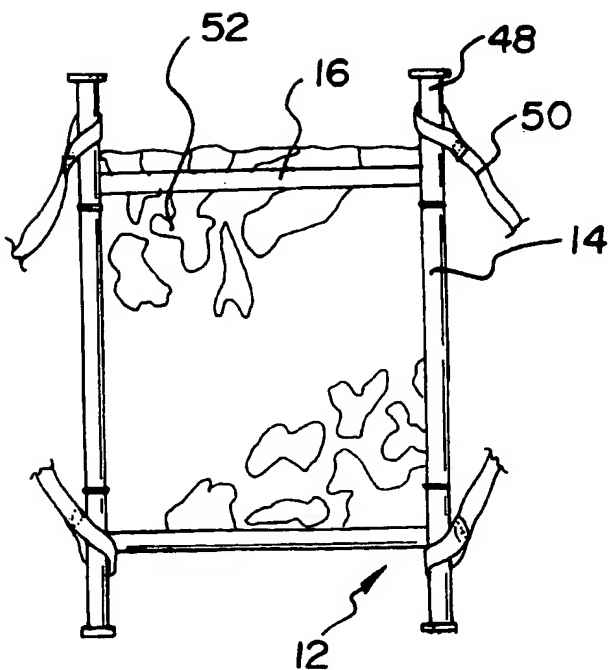
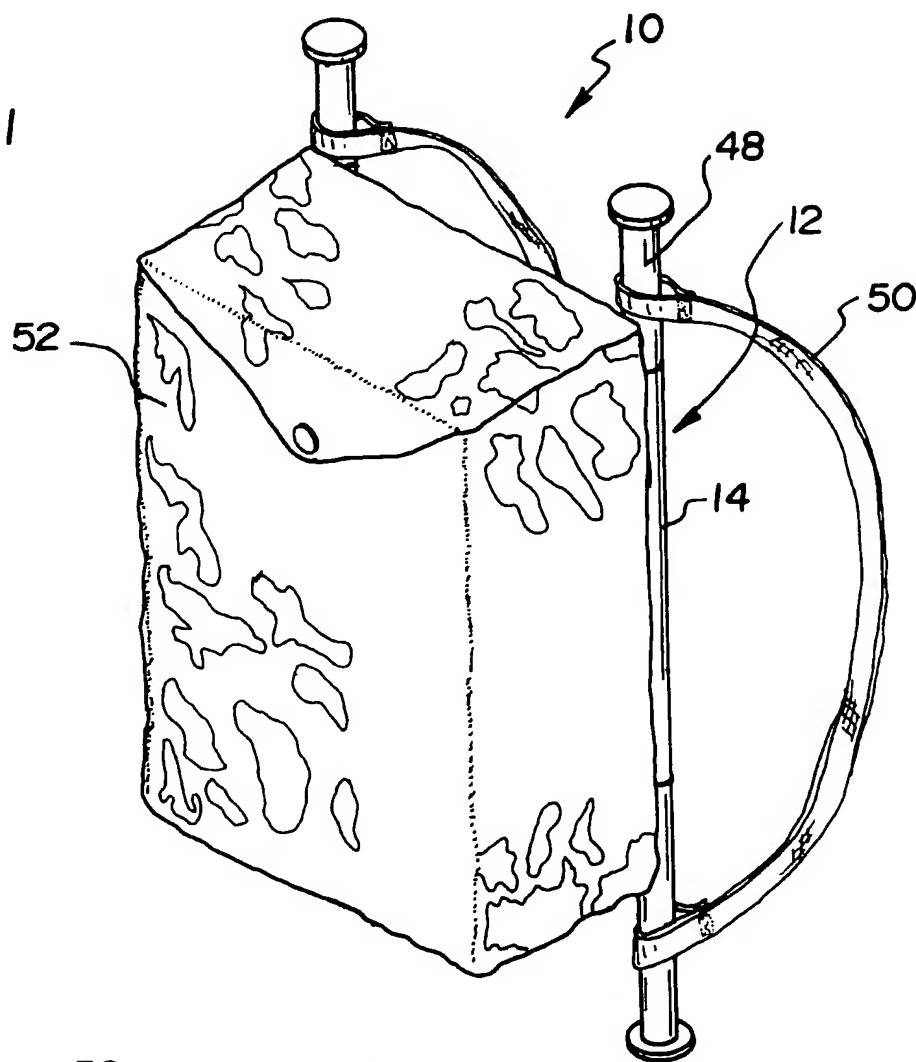
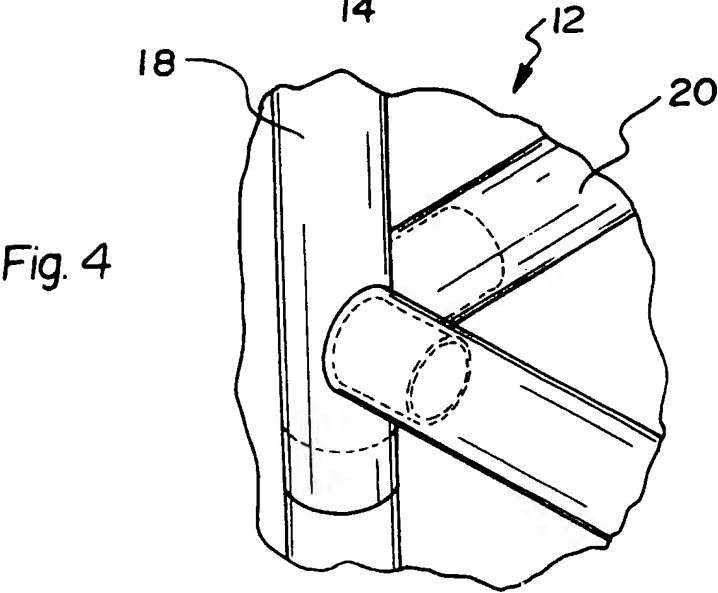
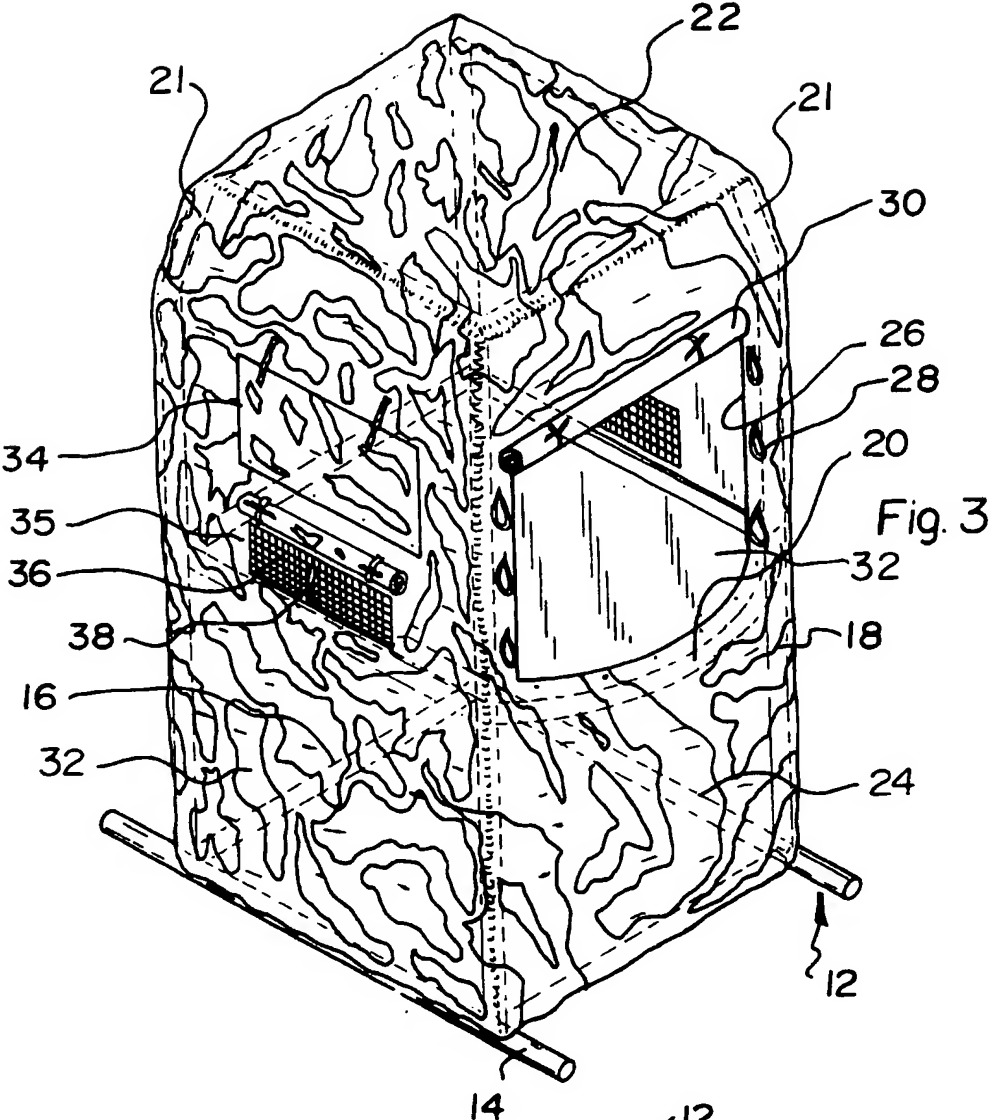
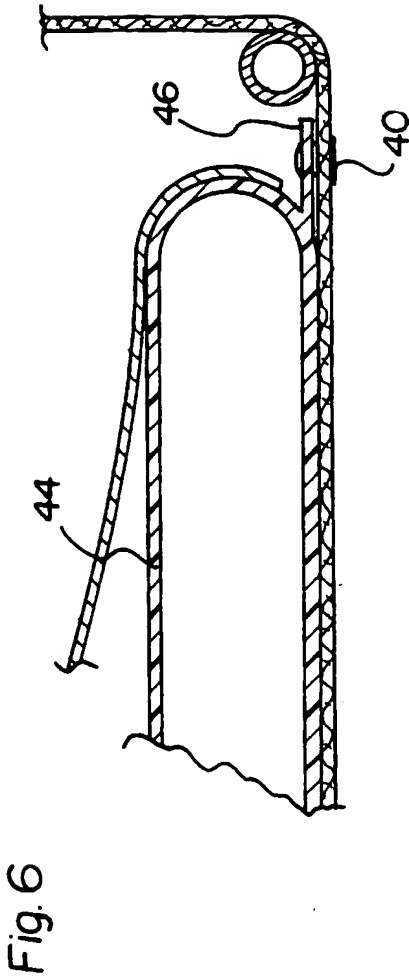
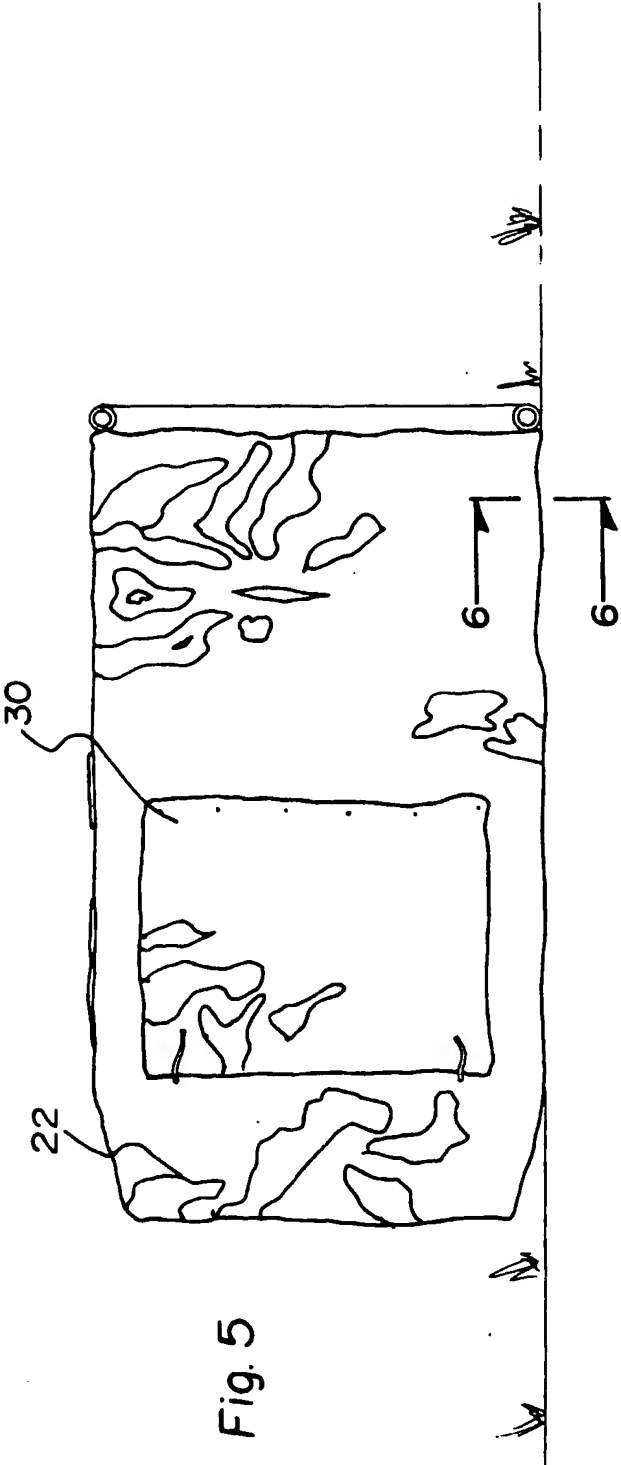


Fig. 2





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PORTABLE COLLAPSIBLE SHELTER

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to tents and more particularly pertains to a new portable collapsible shelter for fishing, hunting and sleeping within a unit which is easily transported and assembled.

2. Description of the Prior Art

The use of tents is known in the prior art. More specifically, tents heretofore devised and utilized are known to consist basically of familiar, expected and obvious structural configurations, notwithstanding the myriad of designs encompassed by the crowded prior art which have been developed for the fulfillment of countless objectives and requirements.

Known prior art tents include U.S. Pat. No. 4,883,206; U.S. Pat. No. 5,277,349; U.S. Pat. No. 4,418,854; U.S. Pat. No. 4,241,745; U.S. Pat. No. 4,251,015, and U.S. Pat. No. Des. 270,928.

In these respects, the portable collapsible shelter according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in so doing provides an apparatus primarily developed for the purpose of fishing, hunting and sleeping within a unit which is easily transported and assembled.

SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of tents now present in the prior art, the present invention provides a new portable collapsible shelter construction wherein the same can be utilized for fishing, hunting and sleeping within a unit which is easily transported and assembled.

The general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new portable collapsible shelter apparatus and method which has many of the advantages of the tents mentioned heretofore and many novel features that result in a new portable collapsible shelter which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art tents, either alone or in any combination thereof.

To attain this, the present invention generally comprises a frame having a base with a pair of hollow elongated rods and a pair of short rods coupled between the elongated rods. Such coupling is effected adjacent to and spaced from ends of the elongated rods for reasons that will soon become apparent. The frame further includes a plurality of stanchions releasably connected to the base and extending upwardly therefrom. Associated therewith is a plurality of interconnect rods coupled between the stanchions at a central extent thereof and at a top end thereof. As such, an intermediate square support and an upper square support are defined, respectively. As shown in FIG. 3, the upper square support includes a diagonal interconnect rod. Next provided is a camouflage canvas including a top wall and four side walls for being removably slid over the stanchions and interconnect rods of the frame. As shown in FIG. 3, a first one of the side walls includes a square cut out. Such square cut out is formed in the first side wall between the intermediate square support and the upper square support of the frame. For passing a gun or fishing pole, a plurality of vertically aligned apertures are formed in the first side wall adjacent to side edges of the square cut out. Further, a flap is integrally coupled to a top edge of the square cut out.

Second and third opposed side walls of the canvas each have an upper rectangular cut out including a flap integrally coupled to a top edge thereof. The second and third opposed side walls further have a lower rectangular cut out situated below the upper rectangular cut out and above the intermediate square support of the frame. A mesh material covers such lower rectangular cut outs. For passing a gun or fishing pole, a vertically oriented bisecting slit is formed in the mesh material. The lower rectangular cut outs of the second and third side walls of the canvas are each also equipped with a flap integrally coupled to a top edge of the lower rectangular cut out. Either the second or third side walls of the canvas has a plurality of snap fasteners mounted about a periphery of an interior surface thereof for reasons that will become apparent hereinafter. Each of the flaps has a first orientation for covering to associated cut out. When in the first orientation, the flaps are held in place by way of snap fasteners mounted along a bottom edge of the flap. These snap fasteners couple with snap fasteners lining a bottom edge of the associated cut out. Each flap is also capable of a second orientation rolled up and tied in place by way of a pair of ties coupled to the top edge of the associated cut out. FIG. 6 shows an inflatable bed with a rectangular configuration. The inflatable bed is formed of a lower face, an upper face and a periphery formed therebetween. Such periphery is equipped with a size and shape similar to that of one of side walls. The lower face has a peripheral lip integrally coupled thereto and extending therefrom in coplanar relationship therewith. This peripheral lip has a plurality of snap fasteners for coupling with those of the side wall of the canvas. After use, the stanchions and the interconnect rods of the frame are collapsible such that the same may be stored within the hollow elongated rods of the frame. Such components are maintained within the hollow elongated rods with caps removably mounted on ends of the elongated rods. The caps are each equipped with a radially extending flange formed on its end. FIGS. 1 & 2 show a pair of flexible shoulder straps each with a closed loop formed on each end. The straps serve for being received by one of the end caps such that the base of the frame may be worn on a back of a user. Lastly, a canvas bag has a face coupled to the base of the frame and an opening with a lid for allowing selective access thereto. After use, the canvas, stanchions, interconnect rods, and inflatable bed may be stored within the bag such that present invention may be transported on the back of the user.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes

of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

It is therefore an object of the present invention to provide a new portable collapsible shelter apparatus and method which has many of the advantages of the tents mentioned heretofore and many novel features that result in a new portable collapsible shelter which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art tents, either alone or in any combination thereof.

It is another object of the present invention to provide a new portable collapsible shelter which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new portable collapsible shelter which is of a durable and reliable construction.

An even further object of the present invention is to provide a new portable collapsible shelter which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such portable collapsible shelter economically available to the buying public.

Still yet another object of the present invention is to provide a new portable collapsible shelter which provides in the apparatuses and methods of the prior art some of the advantages thereof, while simultaneously overcoming some of the disadvantages normally associated therewith.

Still another object of the present invention is to provide a new portable collapsible shelter for fishing, hunting and sleeping within a unit which is easily transported and assembled.

Even still another object of the present invention is to provide a new portable collapsible shelter that includes a frame having a base and a collapsible upper portion. A cover is removably mounted on the upper portion of the frame. A pair of shoulder straps are each coupled to the base of the frame for allowing the same to be worn on a back of a user. Next provided is a bag mounted on the base for receiving the cover.

These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description

thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 is a front perspective view of the present invention in a stored orientation.

FIG. 2 is a rear perspective view of the present invention in the stored orientation.

FIG. 3 is a perspective view of the present invention in an erected deployed orientation for hunting and fishing.

FIG. 4 is a close-up view of the interconnection between the interconnect rods and the stanchions of the present invention.

FIG. 5 is a perspective view of the present invention in a prone deployed orientation for sleeping.

FIG. 6 is a side cross-sectional view of the bed of the present invention taken along line 6—6 shown in FIG. 5.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to FIGS. 1 through 6 thereof, a new portable collapsible shelter embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

The present invention, designated as numeral 10, includes a frame 12 having a base with a pair of hollow elongated rods 14 and a pair of short rods 16 fixedly coupled between the elongated rods. Such coupling is effected adjacent to and spaced from ends of the elongated rods for reasons that will soon become apparent. Note FIG. 2.

The frame further includes a plurality of stanchions 18 connected to the base and extending upwardly therefrom. Associated therewith is a plurality of interconnect rods 20 coupled between the stanchions at a central extent thereof and at a top end thereof. As such, an intermediate square support and an upper square support are defined, respectively. As shown in FIG. 3, the upper square support includes a diagonal interconnect rod 21. It should be noted that the base, stanchions, and interconnect rods may be collapsibly assembled by way of hinges removable male and female joints, or the like.

Next provided is a camouflage canvas 22 including a top wall and four side walls for being removably slid over the stanchions and interconnect rods of the frame. The side walls are preferably twice the size of the top wall. As shown in FIG. 3, a first one of the side walls 24 includes a square cut out 26. Such square cut out is formed in the first side wall between the intermediate square support and the upper square support of the frame. For passing a gun or fishing pole, a plurality of vertically aligned apertures 28 are formed in the first side wall adjacent to side edges of the square cut out. Further, a flap 30 is integrally coupled to a top edge of the square cut out.

Second and third opposed side walls 32 of the canvas each have an upper rectangular cut out 34 including a flap integrally coupled to a top edge thereof. The second and third opposed side walls further have a lower rectangular cut out situated below the upper rectangular cut out and above the intermediate square support of the frame. A mesh material 36 covers such lower rectangular cut outs. For passing a gun or fishing pole, a vertically oriented bisecting slit 38 is formed in the mesh material. The lower rectangular cut outs of the second and third side walls of the canvas are each also equipped with a flap integrally coupled to a top edge of the lower rectangular cut out. Either the second or third side walls of the canvas has a plurality of snap fasteners 40

mounted about a periphery of an interior surface thereof for reasons that will become apparent hereinafter.

Each of the flaps has a first orientation for covering the associated cut out. When in the first orientation the flaps are held in place by way of snap fasteners mounted along a bottom edge of the flap. These snap fasteners couple with snap fasteners lining a bottom edge of the associated cut out. Each flap is also capable of a second orientation rolled up and tied in place by way of a pair of ties coupled to the top edge of the associated cut out.

FIG. 6 shows an inflatable bed 44 with a rectangular configuration. The inflatable bed is formed of a lower face an upper face and a periphery formed therebetween. Such periphery is equipped with a size and shape similar to that of one of side walls of the canvas. The lower face has a peripheral lip 46 integrally coupled thereto which extends there from in coplanar relationship therewith. This peripheral lip has a plurality of snap fasteners for coupling with those of the side wall of the canvas.

In use, the frame and canvas has an erected orientation for allowing a user to hunt and fish from within. Note FIG. 3. When in such orientation, weights such as rocks may be placed on the elongated rods to maintain the frame erect. As shown in FIG. 5, the frame and canvas may be laid in a prone orientation with the bed snappily coupled to the canvas. In such orientation, a user may use the present invention as a protective tent. Ideally, the frame has dimensions of 4x4x6 feet when in use.

After use, the stanchions and the interconnect rods of the frame are collapsible such that the same may be stored within the hollow elongated rods of the frame. Such components are maintained within the hollow elongated rods with caps 48 removably mounted on ends of the elongated rods. The caps are each equipped with a radially extending flange formed on its end.

FIGS. 1 & 2 show a pair of flexible shoulder straps 50 each with a closed loop formed on each end. The straps serve for being received by one of the end caps such that the base of the frame may be worn on a back of a user.

Lastly, a canvas bag 52 has a face coupled to the base of the frame and an opening with a lid for allowing selective access thereto. During use, the bag serves as a bottom of the canvas. After use, the canvas, stanchions, interconnect rods, and inflatable bed may be stored within the bag such that present invention may be transported on the back of the user. It should be noted that either the elongated rods or the canvas bag may be used to store the collapsible upper portion of the frame depending on the means by which the frame is made collapsible and the desires of the user.

As to a further discussion of the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact

construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

I claim:

1. A portable hunting, fishing, and sleeping shelter comprising, in combination:

a frame including a base having a pair of hollow elongated rods and a pair of short rods coupled between the elongated rods adjacent to and spaced from ends of the elongated rods, the frame further including a plurality of stanchions releasably connected to the base and extending upwardly therefrom and a plurality of interconnect rods coupled between the stanchions at a central extent thereof and at a top end thereof to define an intermediate square support and an upper square support, respectively, wherein the upper square support includes a diagonal interconnect rod;

a camouflage canvas including a top wall and four side walls for being removably slid over the stanchions and interconnect rods of the frame, a first one of the side walls including a square cut out formed therein between the intermediate square support and the upper square support of the frame with a plurality of vertically aligned apertures formed in the first side wall adjacent to side edges of the square cut out and a flap integrally coupled to a top edge of the square cut out, second and third opposed side walls of the canvas each having an upper rectangular cut out including a flap integrally coupled to a top edge of the upper rectangular cut out and a lower rectangular cut out situated below the upper rectangular cut out and above the intermediate square support of the frame with a mesh material covering the same which has a vertically oriented bisecting slit formed therein, the lower rectangular cut out of the second and third side walls of the canvas further including a flap integrally coupled to a top edge of the lower rectangular cut out, one of the side walls of the canvas having a plurality of snap fasteners mounted about a periphery of an interior surface thereof, wherein each of the flaps has a first orientation for covering the associated cut out and held in place by way of snap fasteners mounted along a bottom edge of the flap which couple with snap fasteners lining a bottom edge of the associated cut out and a second orientation rolled up and tied in place by way of a pair of ties coupled to the top edge of the associated cut out;

an inflatable bed with a rectangular configuration formed of a lower face, an upper face and a periphery formed therebetween with a size and shape similar to that of one of side walls, the lower face having a peripheral lip integrally coupled thereto and extending therefrom in coplanar relationship therewith, the peripheral lip having a plurality of snap fasteners for coupling with those of one of the side walls of the canvas;

wherein the stanchions and the interconnect rods of the frame are collapsible such that the same may be stored within the hollow elongated rods of the frame and maintained therein with caps removably mounted on ends of the elongated rods each with a radially extending flange formed on an end thereof;

a pair of flexible shoulder straps each with a closed loop formed on each end thereof for being received by one of the end caps such that the base of the frame may be worn on a back of a user; and

a canvas bag having a face coupled to the base of the frame and an opening with a lid for allowing selective

7

access thereto, wherein the canvas, stanchions, interconnect rods, and inflatable bed are stored within the bag when the base of the frame is worn on the back of the user.

2. A portable shelter comprising:

a frame including a base and a collapsible upper portion;
a cover including side walls removably mounted on the upper portion of the frame, one of the side walls of the cover having a plurality of apertures formed therein for allowing the passage of at least one of a gun and a fishing rod;

a pair of shoulder straps each coupled to the base of the frame for allowing the same to be worn on a back of a user; and

a bag mounted on the base for receiving the cover.

3. A portable shelter as set forth in claim 2 wherein one of the side walls of the cover has an opening with a mesh material mounted thereover, the mesh material having a slit formed therein for allowing the passage of at least one of a gun and a fishing rod.

4. A portable shelter as set forth in claim 2 and further including a bed removably mounted on a side wall of the cover for supporting the user when the frame is laid sideways.

5. A portable shelter as set forth in claim 4 wherein the bed is inflatable.

6. A portable shelter as set forth in claim 2 wherein the base has a pair of short interconnect rods extending between a pair of elongated rods, the short interconnect rods and the elongated rods are for having weight supported thereon to maintain the frame upright.

7. A portable shelter comprising:

a frame including a base and a collapsible upper portion;
a cover including side walls removably mounted on the upper portion of the frame, one of the side walls of the cover having an opening with a mesh material mounted thereover, the mesh material having a slit formed therein for allowing the passage of at least one of a gun and a fishing rod;

a pair of shoulder straps each coupled to the base of the frame for allowing the same to be worn on a back of a user; and

a bag mounted on the base for receiving the cover.

8

8. A portable shelter as set forth in claim 7 and further including a bed removably mounted on a side wall of the cover for supporting the user when the frame is laid sideways.

9. A portable shelter as set forth in claim 8 wherein the bed is inflatable.

10. A portable shelter as set forth in claim 7 wherein the base has a pair of short interconnect rods extending between a pair of elongated rods, the short interconnect rods and the elongated rods are for having weight supported thereon to maintain the frame upright.

11. A portable shelter comprising:

a frame including a base and a collapsible upper portion;
a cover including side walls removably mounted on the upper portion of the frame;

a bed removably mounted one of the side walls of the cover for supporting the user when the frame being laid sideways;

a pair of shoulder straps each coupled to the base of the frame for allowing the same to be worn on a back of a user; and

a bag mounted on the base for receiving the cover.

12. A portable shelter as set forth in claim 11 wherein the bed is inflatable.

13. A portable shelter as set forth in claim 11 wherein the base has a pair of short interconnect rods extending between a pair of elongated rods, the short interconnect rods and the elongated rods are for having weight supported thereon to maintain the frame upright.

14. A portable shelter comprising:

a frame including a base and a collapsible upper portion, the base has a pair of short interconnect rods extending between a pair of elongated rods, the short interconnect rods and the elongated rods are for having weight supported thereon to maintain the frame upright;

a cover including side walls removably mounted on the upper portion of the frame;

a pair of shoulder straps each coupled to the base of the frame for allowing the same to be worn on a back of a user; and

a bag mounted on the base for receiving the cover.

* * * * *

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Hodnett

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(54) **HUNTING STAND AND BLIND**

(76) Inventor: **John Hodnett, Rte. 1, Box 1423, Shell Knob, MO (US) 65747**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(58) Field of Search **182/129, 135, 182/187, 188; 135/90, 901**

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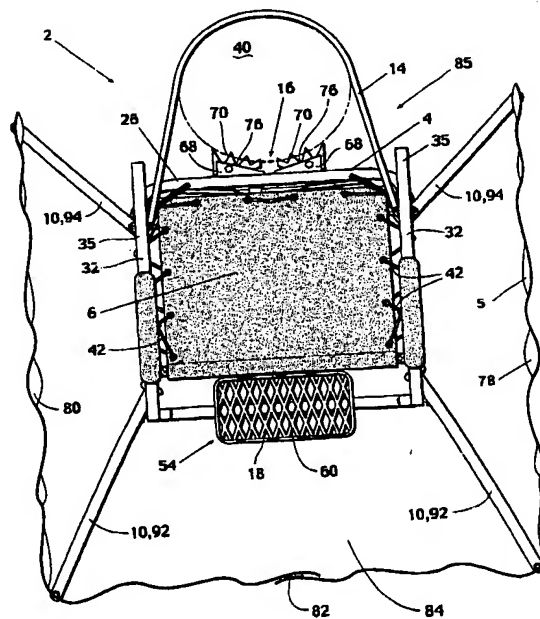
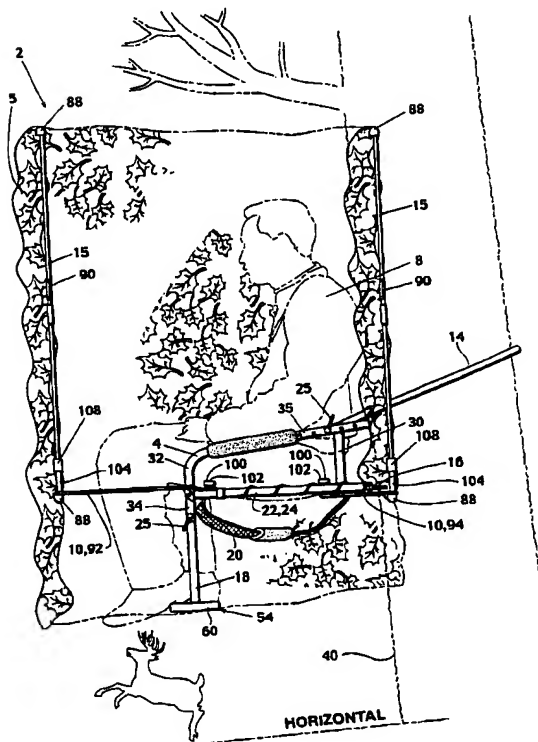
Primary Examiner—Bruce A. Lev

(74) Attorney, Agent, or Firm—Fellers, Snider, Blankenship, Bailey & Tippens

(57) **ABSTRACT**

A stand for hunting or photography comprising: (a) a seat structure adapted to be removably positionable on a tree trunk and (b) a cover removably supportable by the seat structure in a manner effective for at least partially concealing a user when seated in the seat structure from front view, side view, back view, or a combination thereof.

18 Claims, 7 Drawing Sheets





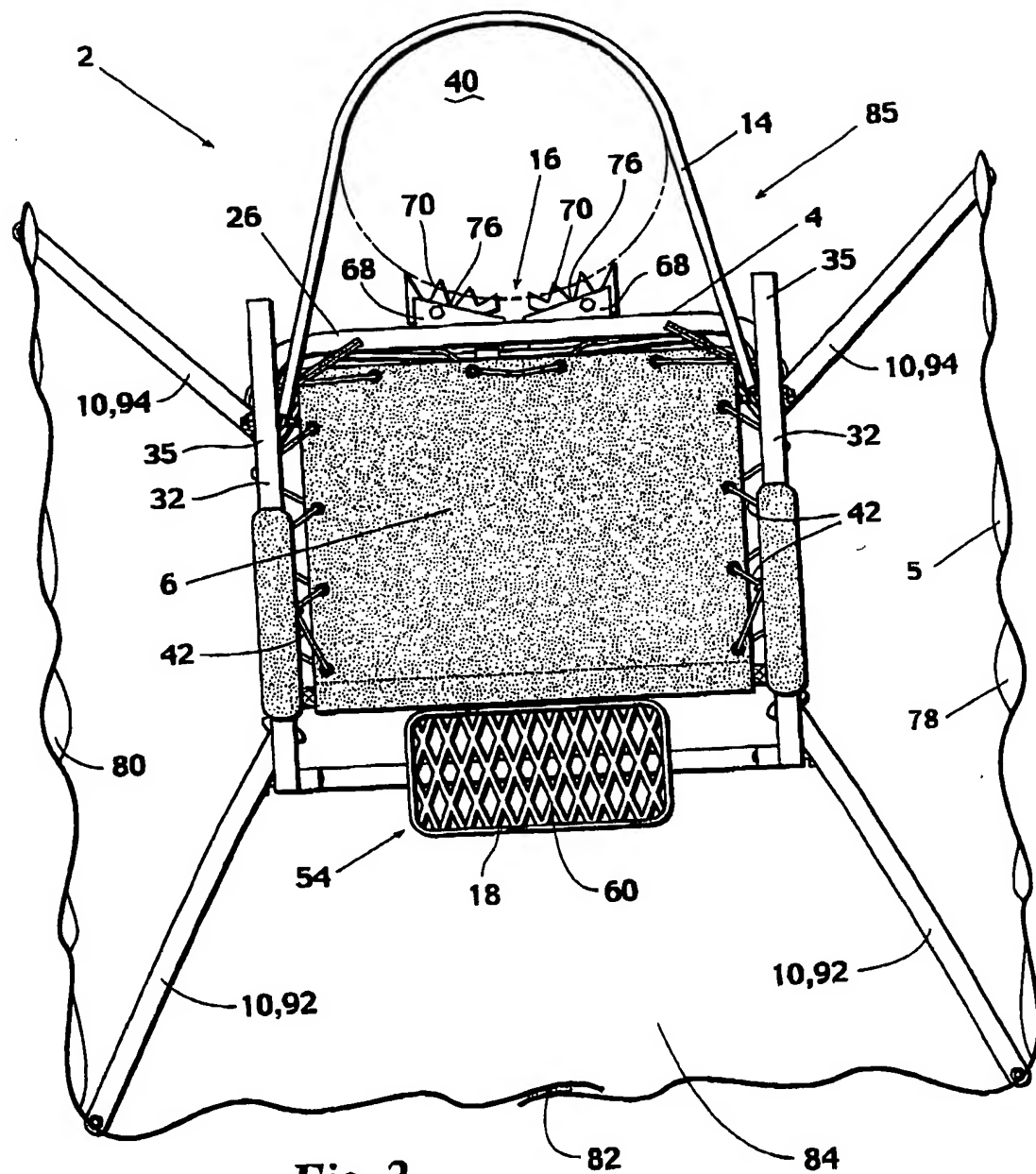


Fig. 2

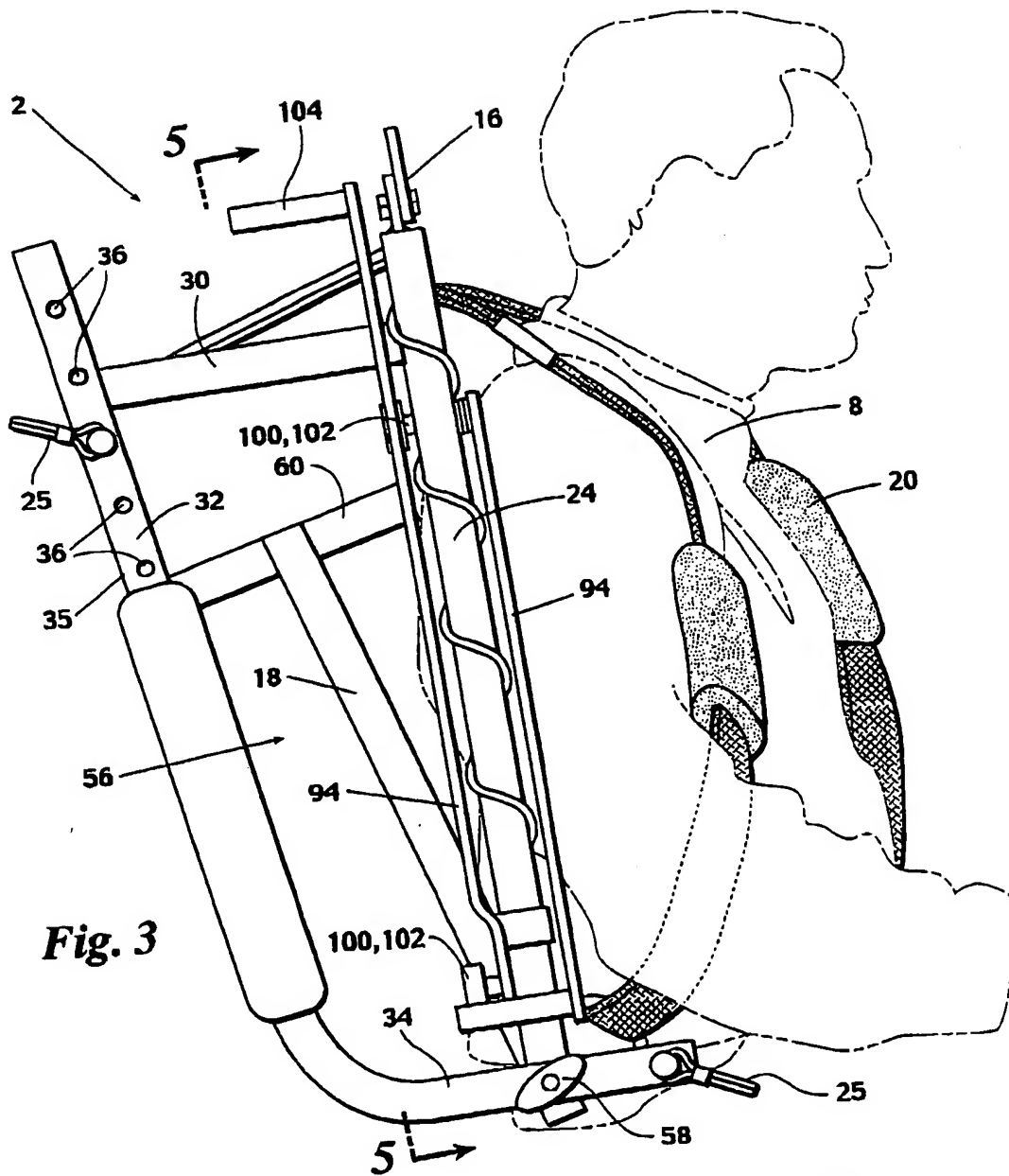


Fig. 3

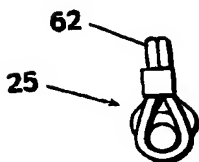


Fig. 7



Fig. 6

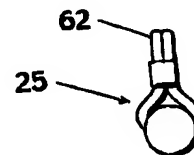


Fig. 8

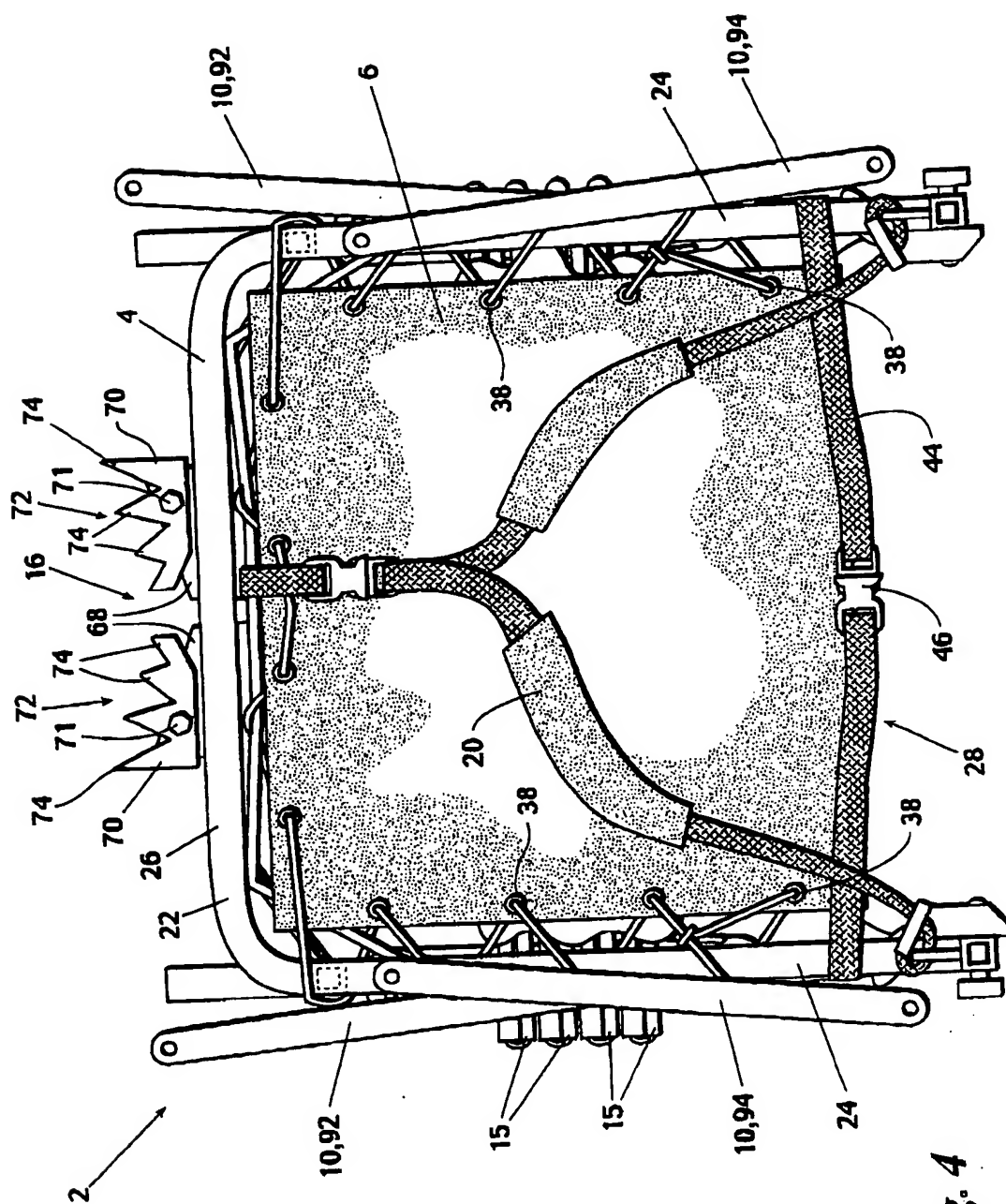
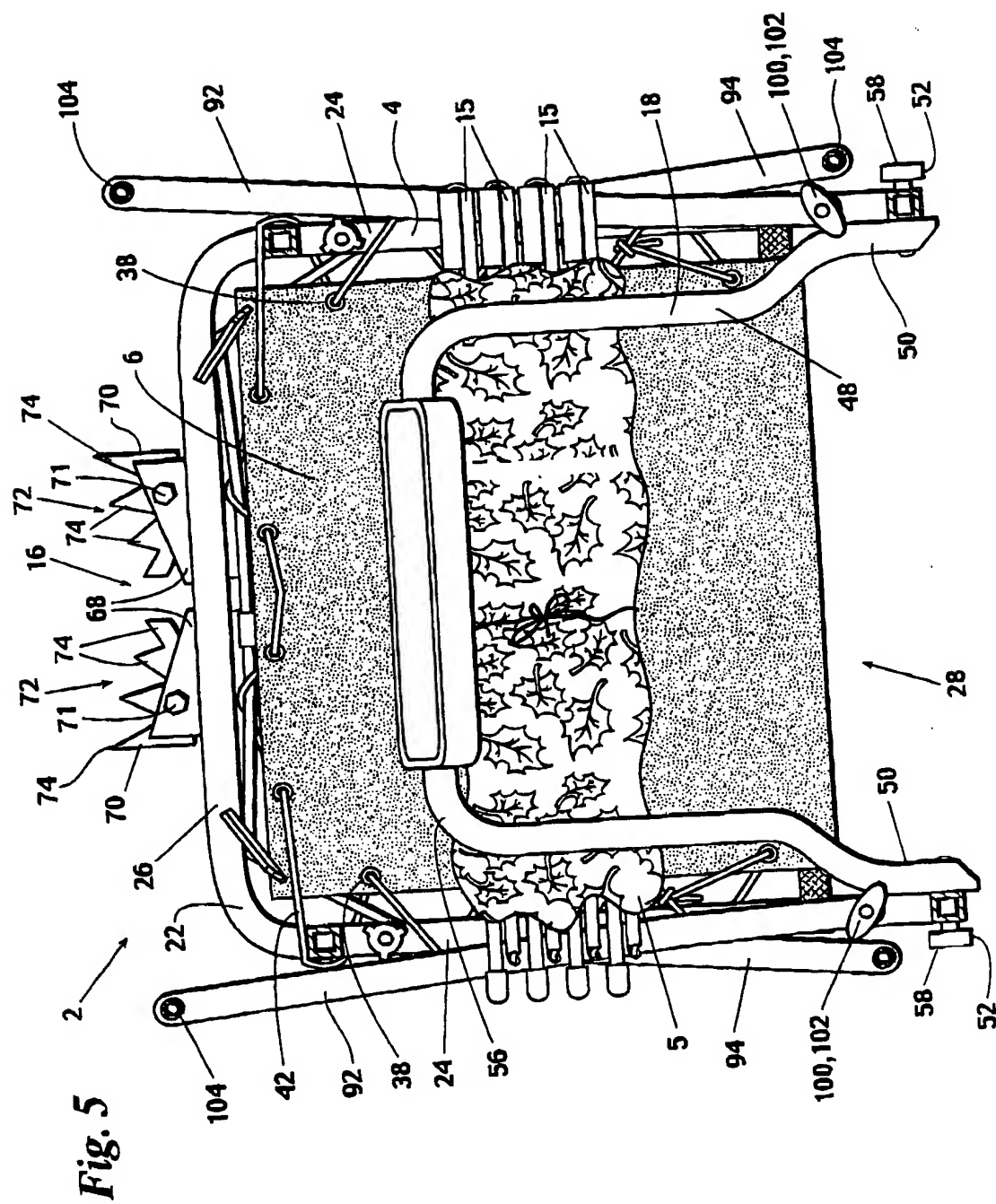
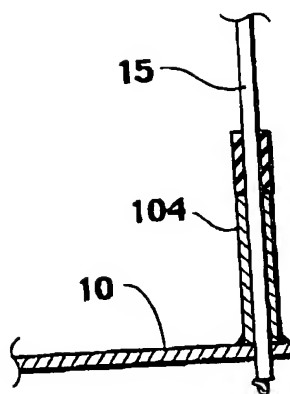
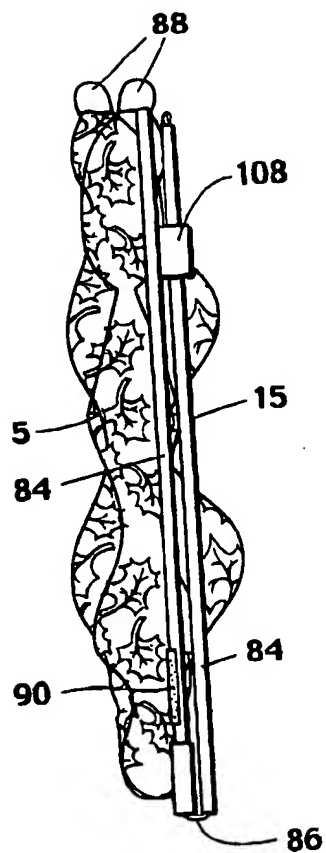
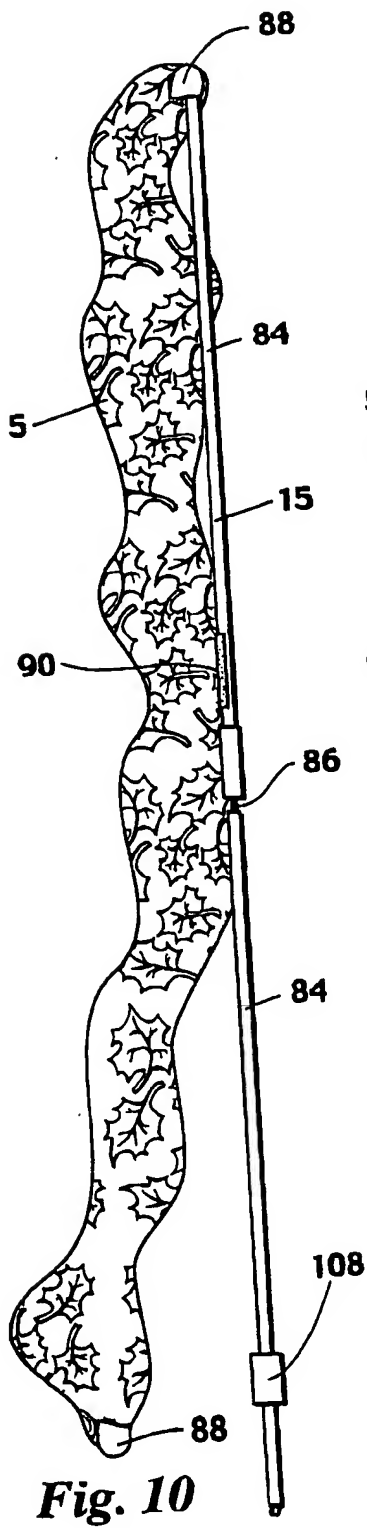
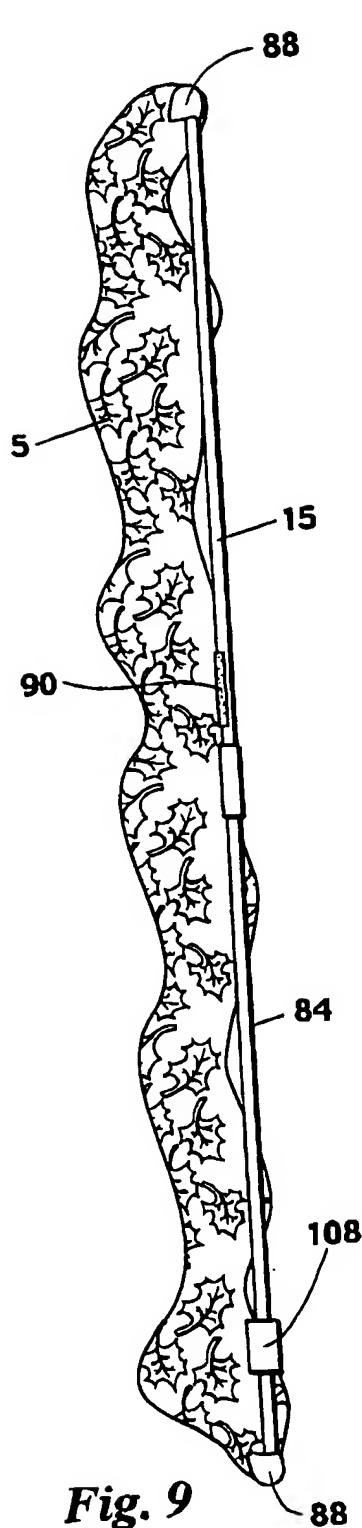
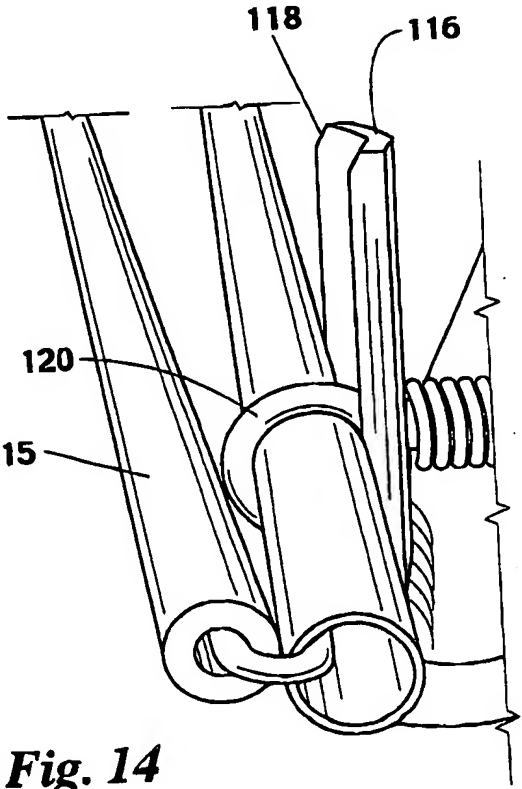
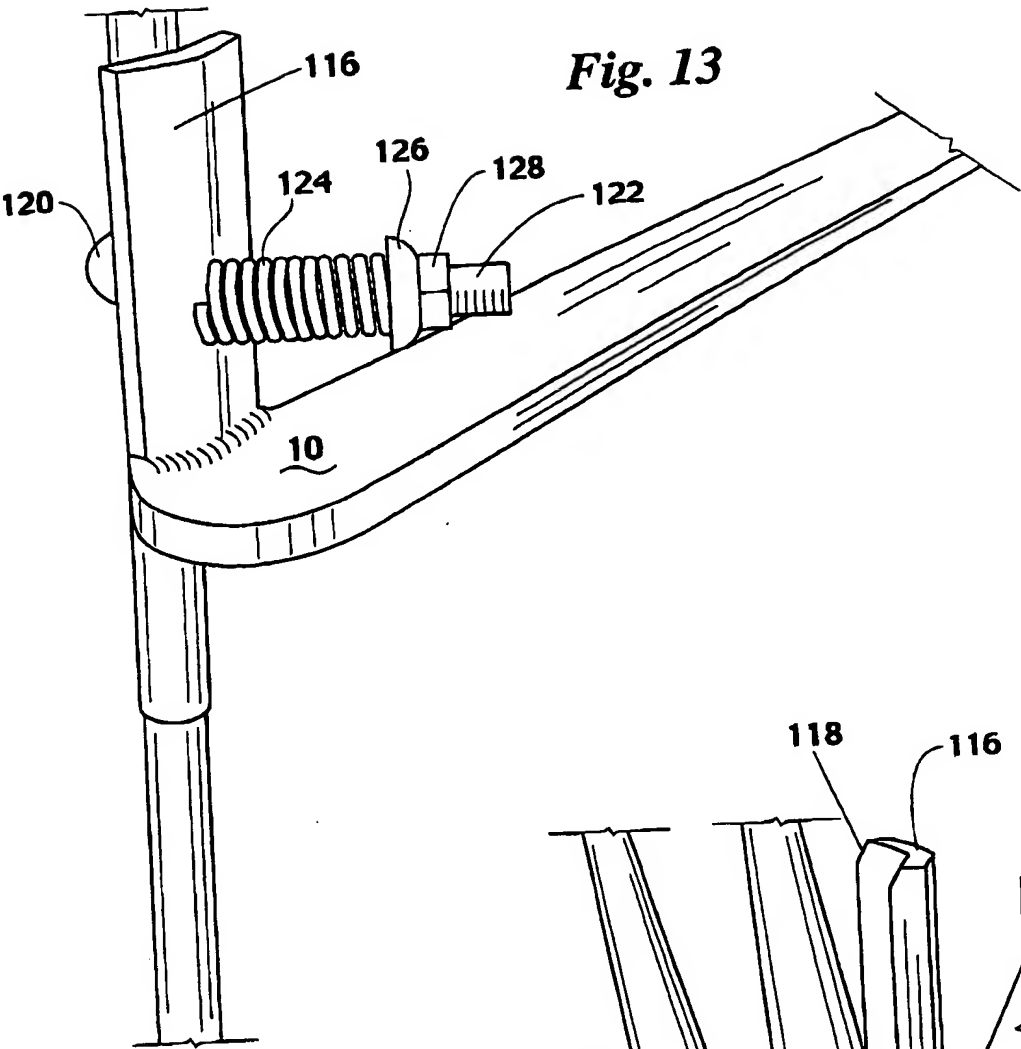


Fig. 4







HUNTING STAND AND BLIND

FIELD OF THE INVENTION

The present invention relates to portable and carryable stands and blinds for hunting.

BACKGROUND OF THE INVENTION

A need presently exists for a stand and blind which can be easily carried to generally any desired location and which is well suited for hunting, observing, or photographing deer, ducks, or generally any other type of game. A need particularly exists for a hunting stand which can be secured to a tree trunk and which will be effective for hunting, photography, etc., even when positioned close to the ground. The ability to effectively use the stand when positioned close to the ground would be particularly desirable for certain types of hunting and/or for older users or others who may have difficulty installing and/or climbing into an elevated stand.

SUMMARY OF THE INVENTION

The present invention provides a stand for hunting or photography which satisfies the needs and alleviates the problems mentioned hereinabove. In one aspect, the inventive stand comprises: (a) a seat structure adapted to be removably positionable on a tree trunk and (b) a cover removably supportable by the seat structure in a manner effective for at least partially concealing a user when seated on said seat structure from at least one of a front view, a side view, a back view, or a combination thereof. The cover is preferably a soft camouflage cover.

In another aspect, the present invention provides a stand for hunting or photography comprising: a carryable seat structure adapted to be removably positionable on a tree trunk; a soft cover; and at least one arm extendable from the seat structure for supporting the soft cover in a manner effective for at least partially concealing a user when seated on said seat structure from at least one of a front view, a side view, a back view, or a combination thereof. The stand preferably comprises a plurality of arms pivotably extendable from the seat structure and a plurality of rods removably extendable from the arms such that the soft cover is positionable on the rods for supporting the soft cover.

Further objects, features, and advantages of the present invention will be apparent to those skilled in the art upon examining the accompanying drawings and upon reading the following description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 provides an elevational side view of an embodiment 2 of the inventive hunting stand positioned on a tree trunk 40.

FIG. 2 provides a plan view of inventive hunting stand 2 positioned on tree trunk 40.

FIG. 3 provides an elevational side view of inventive hunting stand 2 in its folded position for carrying.

FIG. 4 provides an elevational front view of inventive hunting stand 2 in its folded position for carrying.

FIG. 5 provides a partially cutaway, elevational back view of inventive hunting stand 2 in its folded position as seen from perspective 5—5 shown in FIG. 3.

FIG. 6 provides a side view of an attachment pin 25 of a type particularly well suited for use in inventive hunting stand 2.

FIG. 7 provides a distal end view of attachment pin 25.

FIG. 8 provides a proximal end view of attachment pin 25.

FIG. 9 depicts a soft cover 5 used in inventive hunting stand 2 with a collapsible flex rod 15 attached thereto for supporting the cover in a vertical position.

FIG. 10 depicts the collapsible flex rod 15 being partially detached from soft cover 5.

FIG. 11 depicts soft cover 5 and collapsible flex rod 15 in folded position for storage.

FIG. 12 depicts the lower end of flex rod 15 as supported in the end portion of an extendable support arm 13 employed in inventive hunting stand 2.

FIG. 13 provides an outside view of an alternative cover holding structure 115 which can be used in the inventive stand.

FIG. 14 provides an end view of cover holding structure 115.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

An embodiment 2 of the stand provided by the present invention is depicted in FIGS. 1–5. Inventive stand 2 preferably comprises: a seat frame 4 having a seat 6 thereon; a vertical cover 5 extendable around at least a portion of seat frame 4 for concealing a user 8 sitting in seat 6; a plurality of cover support arms 10 pivotably extendable from seat frame 4; a plurality of cover attachment rods 15 removably receivable in support arms 10; an attachment 14 extendable from the rear of seat frame 4 for positioning around a tree trunk 40; a blade assembly 16 projecting from the rear of seat frame 4; a foot rest 18 pivotably attached to the front of seat frame 4; and shoulder straps 20 attachable to the bottom of seat frame 4 for carrying the inventive hunting stand 2 in a manner depicted in FIG. 3.

The particular seat frame 4 employed in embodiment 2 of the inventive hunting stand comprises: a U-shaped support 22 having sides 24, a lateral back piece 26 and an open front 28; a pair of vertical supports 30 extending upwardly from the rearward portion of U-shaped support 22; and a pair of opposing, curved side pieces 32.

Curved side pieces 32 can be shaped to provide comfortable arm rest supports for the user 8 and preferably comprise: curved forward end portions 34 which are attached to and preferably extend downwardly beyond the forward ends of the side pieces 24 of U-shaped support 22; rearwardly extending, and preferably upwardly angled, upper segments 35 which are attached to and preferably extend rearwardly beyond the vertical supports 30; and a plurality of lateral holes or other apertures 36 provided in series in the rearward portions of top segments 35 for adjustably retaining the attachment 14 to accommodate tree trunks 40 of different diameter. Arm rest pads 33 are preferably provided on side pieces 22 for the user's comfort.

To facilitate carrying and installation, frame 4 is preferably formed of a sturdy but lightweight material. Frame 4 will preferably be formed of tubular metal and will most preferably be formed from sturdy, tubular aluminum.

The seat 6 is preferably retained on the U-shaped support piece 22 of frame 4 and can generally be any type of structure or cover capable of supporting the user 8. Seat 6 is preferably formed of cloth, canvass, fabric, plastic, or other lightweight material. A plurality of eyelets of similar structures 38 are provided in seat 6 for securing seat 6 in frame 4 using, for example, ropes or cords 42.

To support the forward end of seat 6 and prevent excessive sagging, an elongate strap or similar structure 44 is

3

preferably attached across the forward end of seat 6. The ends of strap 44 extend over and around the lower side pieces 24 of seat frame 4 and are attached together by a buckle or other attachment structure 46. The attachment structure 46 will preferably be of a type which will allow the attachment of strap 44 on seat frame 4 to be tightened or loosened as desired.

Foot rest 18 can generally be any type of structure capable of supporting the user's feet and will preferably be pivotably or collapsibly attached to seat frame 4 such that foot rest 18 can be folded or otherwise moved out of the way for carrying. Foot rest 18 preferably comprises a U-shaped member 48 having outwardly extending or tapered sides 50 and a pair of attachment bolts or similar structures 52 for pivotably attaching the sides 50 of foot rest 18 to seat frame 4. By tightening or loosening bolts 52, foot rest 18 can be selectively held in or moved to and from its operating position 54 depicted in FIGS. 1 and 2 and its folded or carrying position 56 depicted in FIGS. 3 and 5. Bolts 52 preferably have enlarged knobs, wings, or other structures 58 on the outer ends thereof so that they can be easily tightened or loosened by hand. Foot rest 18 also preferably comprises a grate, plate, or similar structure 60 attached to the lower end of U-shaped member 48 to provide a wider, more comfortable support for the user's feet.

To further assist in securing foot rest 18 in its unfolded, operating position 54, inventive apparatus 2 can also include a pair of locking pins 25. Locking pins 25 are removably received through apertures (not shown) provided through the upper portions of foot rest side pieces 50 and through the downwardly projecting segments 34 of frame side pieces 32. As will be understood by those skilled in the art, each of locking pins 25 preferably includes a spring wire or similar structure 62 which is pivotably attached to one end of the pin and can be flexed outwardly for placement over the other end of the pin to thus lock the pin 25 in place. Pins 25 of this type are preferably used for both locking foot rest 18 in operating position 54 and adjustably securing the ends of attachment structure 14 to the rearwardly projecting portions of frame side pieces 32.

Attachment structure 14 can generally be any type of structure which will extend around tree trunk 40 for holding the inventive stand 2 in cantilevered position. Attachment 14 will preferably be a flexible structure such as a cable, a chain, an implement-type sprocket chain, a rope, or a cord. Attachment 14 will preferably be a cable, chain, or sprocket chain having a plastic sheath 54 on the exterior thereof. Loops or other structures can be provided in the ends of attachment structure 14 for securing the attachment structure to frame 4 using locking pins 25 or other attachment devices.

The blade assembly 16 employed in inventive stand 2 preferably extends from the back 26 of frame piece 22 such that blade assembly 16 is spaced below, and will thus operate in conjunction with, attachment piece 14 to hold seat frame 4 in cantilevered position on tree trunk 40. Blade assembly 16 preferably comprises: (a) a pair of fixed plates or similar structures 68 which project rearwardly from frame piece 26 and (b) a pair of blades 70 pivotably attached on fixed plates 68 using pins, bolts, or other attachments 71. Blades 70 preferably have angled inner edges 72 with a plurality of teeth 74 formed therein for biting into tree trunk 40 to assist in holding seat frame 4 in secure position and to prevent the inventive apparatus from sliding on trunk 40.

The pivotable attachment of blades 70 and the angled orientation of inner edges 72 allow blade assembly 16 to automatically adapt to tree trunks of different size, without

4

manual adjustment. As will be apparent to those skilled in the art, blades 70 will automatically pivot inwardly when necessary to adapt to a relatively small tree and will automatically pivot outwardly when placed on a larger tree. The pivoting movement of blades 70 thus ensures that a greater number of teeth 74 will consistently be in contact with tree trunk 40 over a wide range of trunk diameters. If desired, additional gripping teeth (not shown) can also be provided in the angled rearward edges 76 of the fixed plates 68 employed in blade assembly 16.

The cover 5 employed in inventive apparatus 2 can generally be any type of cover capable of at least partially concealing the user 8 from view. The cover 5 employed in inventive apparatus 2 will preferably be a soft cover of a type which is foldable and lightweight. Examples of suitable soft cover materials include, but are not limited to, netting, fabric, cloth, canvass, plastic, and combinations thereof. The cover will preferably also be of a camouflaged design, as illustrated in FIG. 1. Cover 5 will most preferably be formed of a fine net material capable of concealing user 8 while allowing a sufficient degree of visibility therethrough for spotting and/or observing the desired game.

The particular cover 5 depicted in the figures is a two-piece cover comprising: a first vertical panel or sheet 78 which extends across one side of the inventive apparatus; a second vertical panel or sheet 80 which extends across the other side of the inventive apparatus; and a plurality of Velcro™ strips, ties, or other attachment structures 82 provided at the leading ends of panels 78 and 80 for attaching or tying the panels together across the front 84 of the inventive apparatus. The two piece cover 5 is thus openable and closeable in front and, when closed, operates to conceal the user 8 in front and on each side. As will be understood by those skilled in the art, the cover 5 can also be adapted to extend rearwardly around tree trunk 5 or to otherwise conceal the user 8 from being viewed from the back 85 of inventive apparatus 2.

Each of the panels 78 and 80 of cover 5 is held in vertical position by a pair of cover attachment rods 15. As depicted in FIGS. 9-10, attachment rods 15 are preferably flexible, collapsible members of a type known in the art such that the rods 15 can be conveniently folded for storage and carrying. Collapsible flex rods 15 of this type are readily available and typically comprise two or more hollow rod segments 84 having an elastic cord or similar device 86 extending there-through. The elastic cord 86 operates to pull the individual segments 84 together when assembled end-to-end as depicted in FIG. 9 but also allows the individual segments 84 to be pulled apart and folded, as depicted in FIGS. 10 and 11.

The panels 78 and 80 of cover 5 preferably have pouches 88 or other structures provided thereon for receiving the ends of attachment rods 15 to thus retain cover pieces 78 and 80 in their vertically extending positions for concealing the user 8. To further enhance the attachment of cover sheets 78 and 80 to flex rods 15 and to ensure that the flex rods cannot be accidentally misplaced or lost, each of the flex rods 15 is preferably permanently attached (e.g., by gluing, taping, or any other method) to the inside of cover 5 at at least one location 90.

To deploy cover 5 and flex rods 15 in vertical operating position as depicted in FIGS. 1 and 2, the lower end portions of flex rods 15 are retained by support arms 10. Inventive apparatus 2 preferably includes a pair of front support arms 92 and a pair of rear support arms 94. All of support arms 92 and 94 are pivotably attached to the side pieces 24 of seat

frame 4 so that (a) they can be pivoted outwardly to support the cover 5 in operating position around, and spaced apart from, seat frame 4 but (b) can be folded against or over seat frame 4 for carrying and storage.

To prevent the forward and rearward arms 92 and 94 from interfering with each other when pivoted to their carrying positions, the forward arms 92 are pivotably attached to the top of frame side pieces 24 and the rearward support arms 94 are pivotably attached to the bottom of frame side pieces 24. Of course, this arrangement could be reversed so that forward arms 92 are pivotably attached below and rearward arms 94 are pivotably attached above frame side pieces 24. Support arms 92 and 94 are preferably pivotably secured to seat frame 4 using bolts or similar structures 100 having enlarged knobs, wings, or other structures 102 provided thereon to allow the attachments 100 to be conveniently tightened and loosened by hand.

Each of support arms 92 and 94 preferably includes a vertical tube or other hollow structure 104 provided at the distal end thereof for receiving the lower end of a flex rod 15. The tubes 104 are preferably sized and configured such that when received in vertical tubes 104, the bottom ends of flex rods 15 will project downwardly through the distal ends of support arms 92 and 94.

Stops 108 are provided on flex rods 15 to retain flex rods 15 in, and to prevent the flex rods from simply falling through, vertical holders 104. Stops 108 are preferably repositionable on flex rods 15 so that, by moving stops 108, the position of flex rods 15 and cover 5 with respect to seat frame 4 can be vertically adjusted. Additionally, the lower ends of flex rods 15 are preferably removably receivable in cover pockets 88 so that the pockets can be placed over the lower ends of the flex rods 15 after the flex rods are inserted through holding tubes 104 as depicted in FIG. 12. The pockets 88 can then also be removed from the lower ends of flex rods 15 when taking the flex rods 15 out of holding tubes 104.

When carrying inventive apparatus 2 to a desired location, foot rest 18 can be conveniently folded/pivoted over onto the top of seat 6 and cover support arms 92 and 94 can be folded against the sides of seat frame 4. Additionally, soft cover 5 and the flex rods 15 attached thereto can be conveniently folded and tied or otherwise secured on top of seat 6 as depicted in FIG. 5. The inventive apparatus thus forms a compact unit for carrying, as depicted in FIG. 3, using shoulder straps 20.

An embodiment 115 of an alternative structure for securing flex rods 15 in vertical position at the ends of support arms 10 is depicted in FIGS. 13 and 14. Alternative structure 115 preferably comprises: a vertical support 116 provided at the outer end of the support arm 10; a curved or semicircular vertical surface 118 provided in the inner side of vertical support 116; a hook 120 having a threaded end 122 extending laterally through an aperture provided in vertical support 116; a biasing spring 124 positioned on threaded end 122 such that spring 124 pulls hook 120 into curved surface 118; and a cap 126 and nut 128 which retain spring 124 on threaded end 122.

The hook 120 of structure 115 is received around the flex rod 15 such that hook 120 and spring 124 pull the flex rod 15 into, and securely hold rod 15 against, the curved inner surface 118 of vertical support 116. Spring 124 can have sufficient flexibility to allow flex rod 15 to be placed in or removed from hook 120 by pressing the spring cap 126. In addition or in the alternative, spring 124 can have sufficient flexibility to allow flex rod 15 to be turned laterally, as depicted in FIG. 14, for storage and/or carrying.

Thus, the present invention is well adapted to carry out the objects and attain the ends and advantages mentioned above as well as those inherent therein. While presently preferred embodiments have been described for purposes of this disclosure, numerous changes and modifications will be apparent to those skilled in the art. Such changes and modifications are encompassed within the spirit of this invention as defined by the appended claims.

What is claimed is:

1. A stand for hunting or photography comprising:
 - a seat structure adapted to be removably positionable on a tree trunk;
 - a cover removably supportable by said seat structure in a manner and having a vertical height effective for completely concealing a user when seated on said seat structure at ground level from a front view, a first side view, and a second side view;
 - a plurality of arms pivotably extendable from said seat structure for supporting said cover, said arms having distal ends;
 - a plurality of rods extendable from said arms, said cover being positionable on said rods for supporting said cover;
 - hook structures provided at said distal ends of said arms for releasably grasping said rods; and
 - springs provided on said hook structures for biasing said hook structures toward a grasping position.
2. The stand of claim 1 wherein said cover is a soft cover formed of a material effective for allowing said user to view game through said cover.
3. The stand of claim 2 where said cover is a camouflage cover.
4. The stand of claim 1 further comprising a foot rest pivotably attached to said seat structure.
5. The stand of claim 4 wherein:
 - said stand further comprises a frame structure which includes said seat structure;
 - said foot rest is pivotable to a position below said frame structure for use by said user; and
 - said cover is vertically movable such that a lower portion of said cover can be positioned below said frame structure to conceal said user's feet from said front view, said first side view, and said second side view when said user's feet are placed on said foot rest.
6. The stand of claim 1 further comprising an attachment extendable from said seat structure for positioning around a tree trunk.
7. The stand of claim 1 further comprising a blade assembly projecting from said seat structure, said blade assembly comprising a pair of blades which will contact a tree trunk when said seat structure is positioned thereon, said blades being pivotably mounted such that said blades will automatically adapt, without manual adjustment, for placement on tree trunks of different size.
8. The stand of claim 7 wherein each of said blades includes a plurality of teeth.
9. The stand of claim 1 wherein said cover has a closeable opening.
10. The stand of claim 9 wherein said cover is a two-piece cover.
11. The stand of claim 1 wherein said rods are collapsible.
12. The stand of claim 11 wherein said rods have ends and said cover has pockets for receiving said ends.
13. The stand of claim 11 wherein said cover is permanently attached at at least one location on each of said rods.
14. The stand of claim 1 wherein said cover is vertically movable for vertically repositioning said cover with respect to said seat structure.

7

15. The stand of claim 14 further comprising adjustable stops provided on said rods for vertically repositioning said cover.

16. The stand of claim 1 further comprising curved surfaces at said distal ends of said arms and against which said hook structures releasably grasp said rods.

17. A stand for hunting or photography comprising:

a seat structure adapted to be removably positioned on a tree trunk;

a cover removably supportable by said seating structure in a manner and having a vertical height effective for completely concealing a user when seated on said seat structure at ground level from a front view, a first side view, and a second side view;

8

a plurality of arms pivotably extendable from said seat structure for supporting said cover, said arms having distal ends; and

a plurality of rods extendable from said arms, said cover being positionable on said rods for supporting said cover,

wherein said cover is vertically movable for vertically repositioning said cover with respect to said seat structure, and

said stand further comprises adjustable stops provided on said rods for vertically repositioning said cover.

18. The stand of claim 17 wherein said rods are collapsible.

* * * * *

(12) **United States Patent**
Latschaw

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(45) **Date of Patent:** **Mar. 2, 2004**

(54) **COLLAPSIBLE HUNTING BLIND**

(75) **Inventor:** **Ronald D. Latschaw**, Grants Pass, OR (US)

(73) **Assignee:** **Kolpin Outdoors, Inc.**, Fox Lake, WI (US)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(52) **U.S. Cl.** **43/1**

(58) **Field of Search** **43/1; 135/901, 135/117, 905, 115; 297/184.1**

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Primary Examiner—Peter M. Poon

Assistant Examiner—Joan M. Olszewski

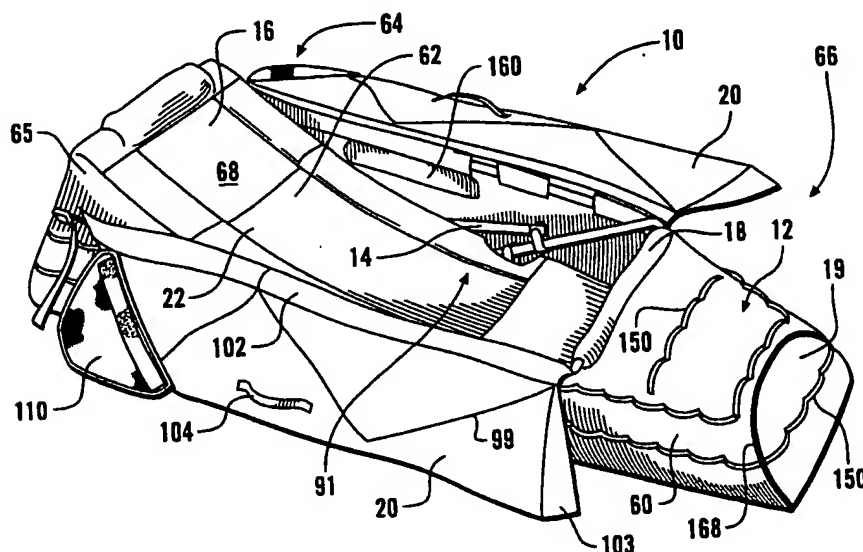
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ABSTRACT

A hunting blind allows the hunter to lie on his back in an inclined position. The hunter's head rests on a head rest. A gun rest is provided laterally across the hunter's body. A pair of flaps cover the hunter and are easily openable when the hunter brings his or her gun into a shooting position and/or moves to a sitting position. The blind is collapsible, requires no assembly in the field, and may be carried on the hunter's back like a backpack.

5 Claims, 7 Drawing Sheets





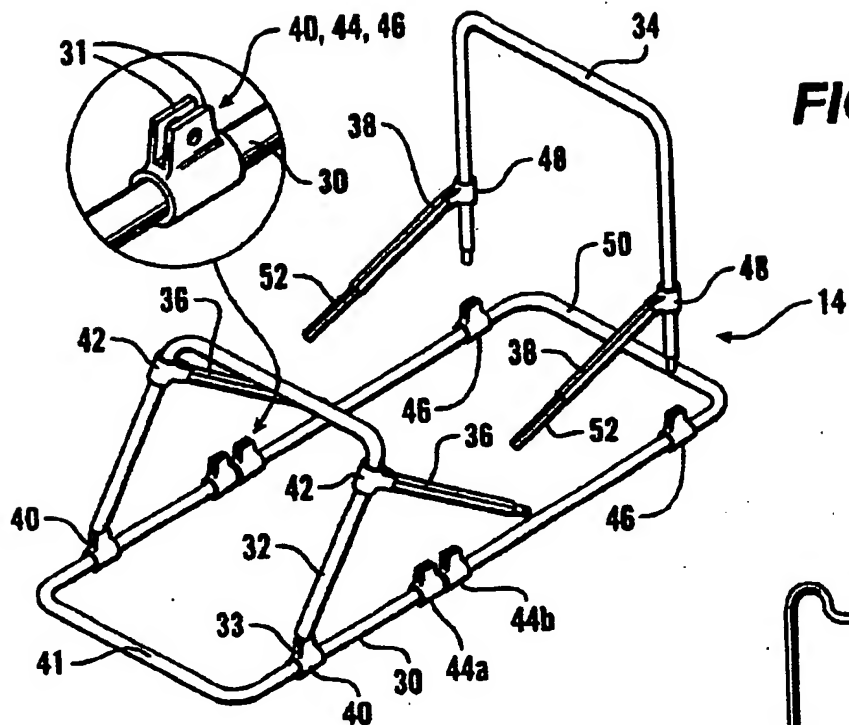


FIG. 3

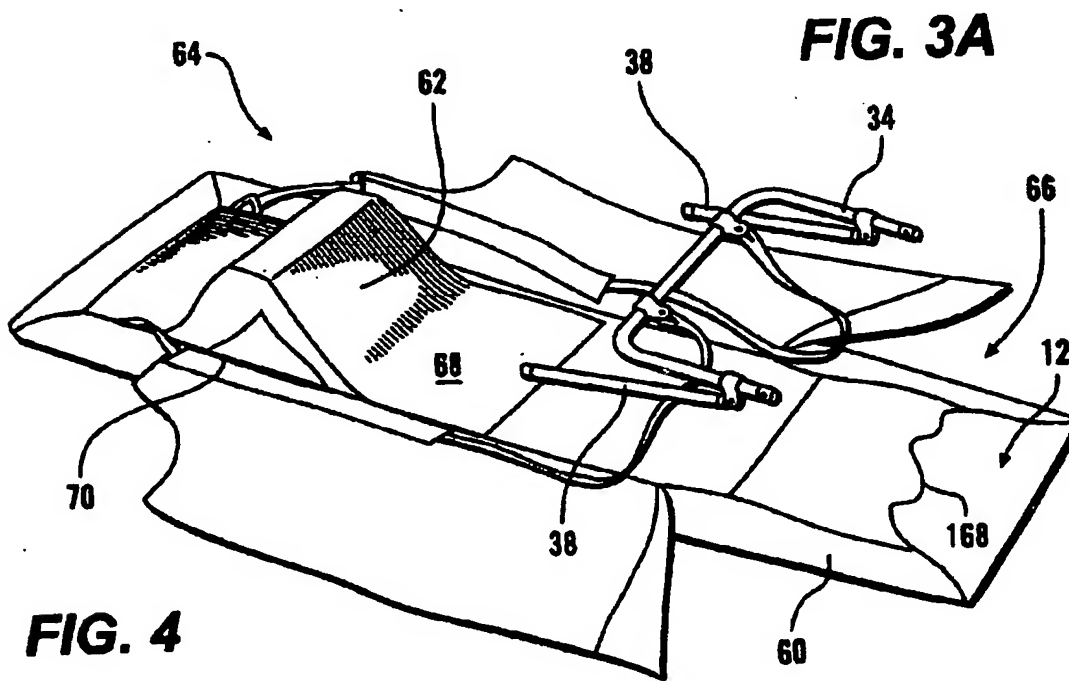
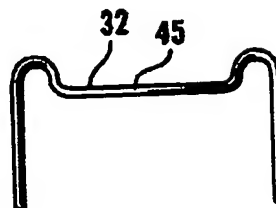
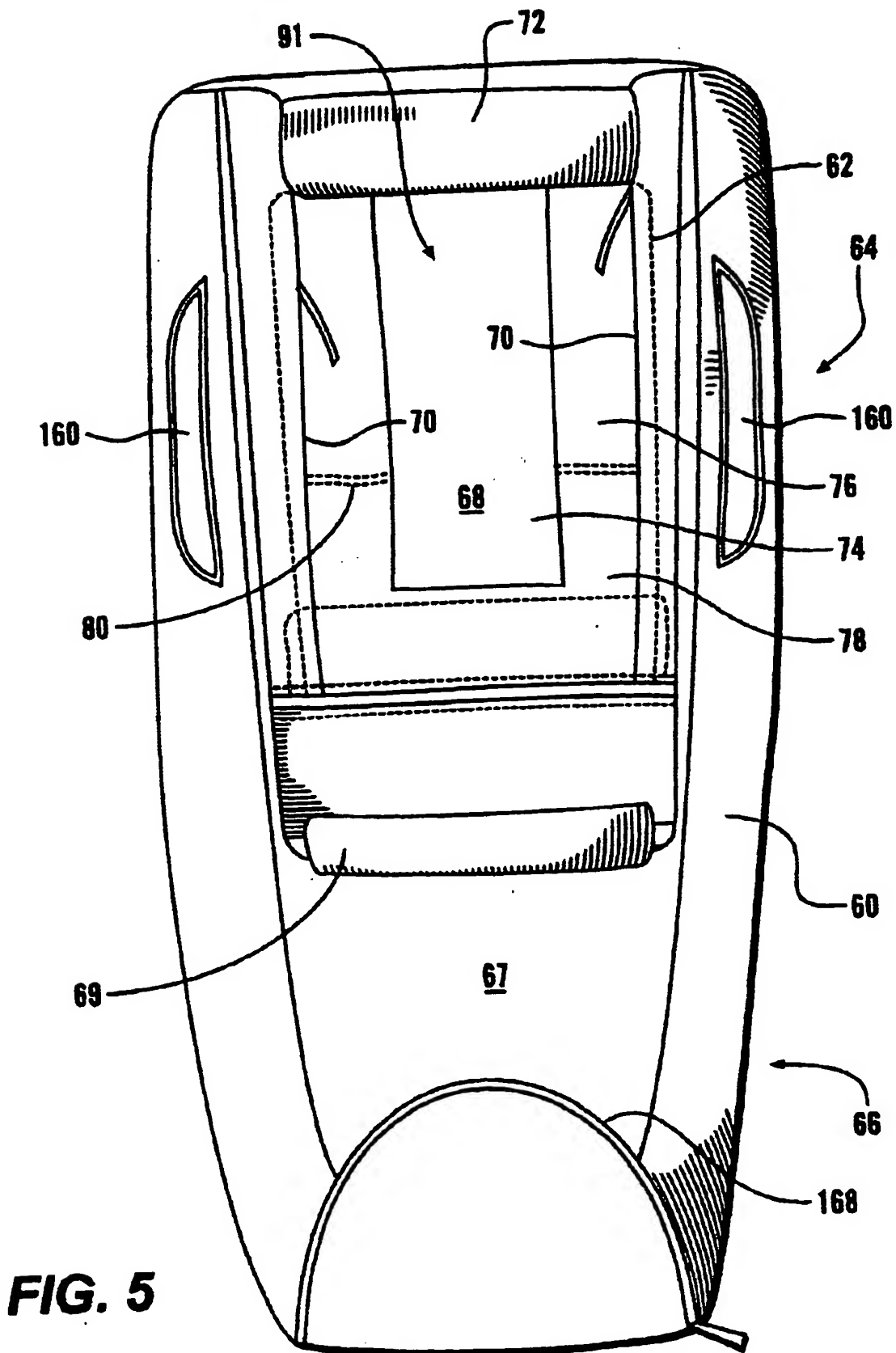


FIG. 3A

FIG. 4



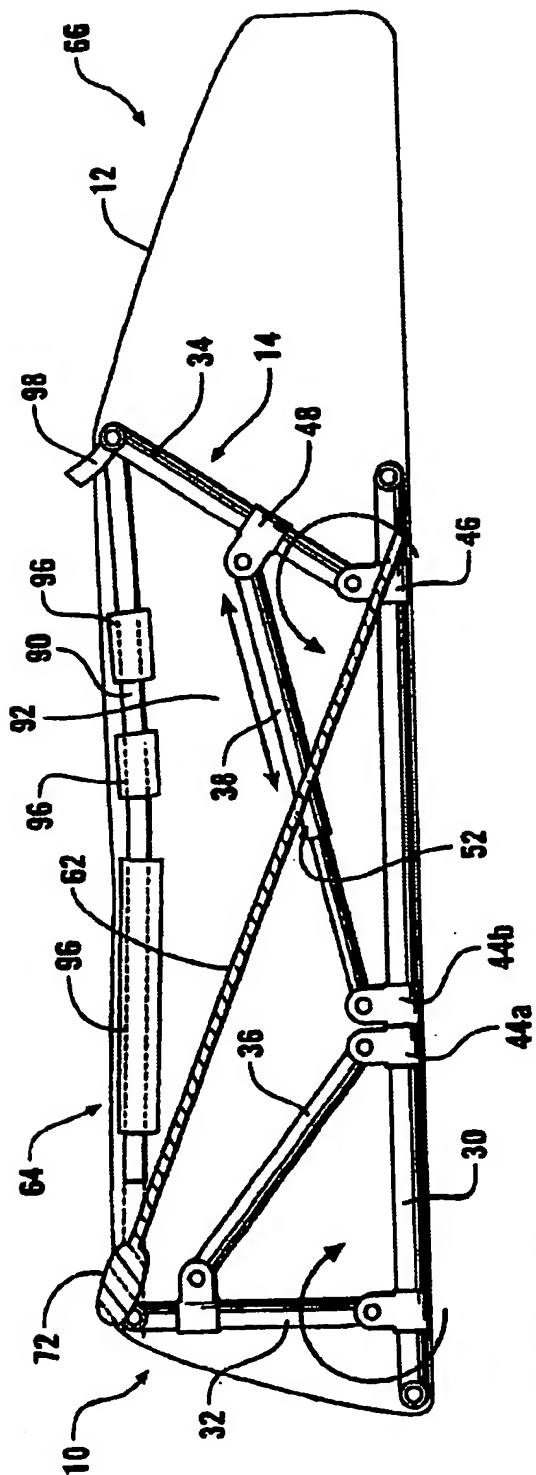


FIG. 6

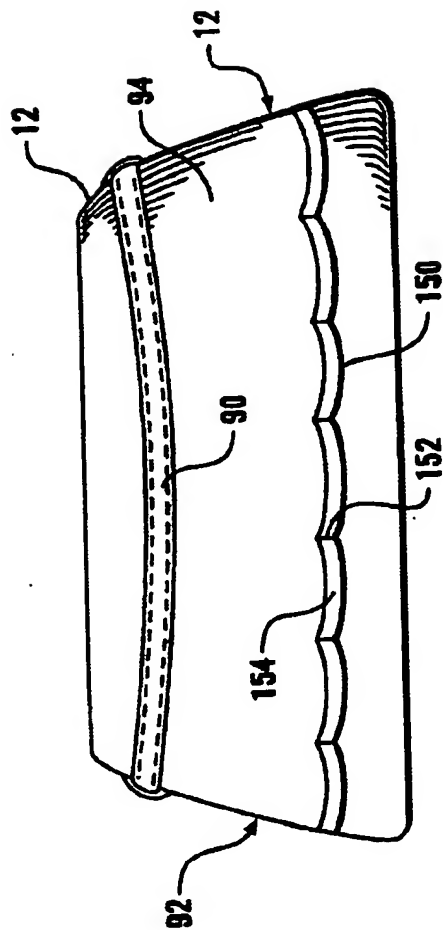
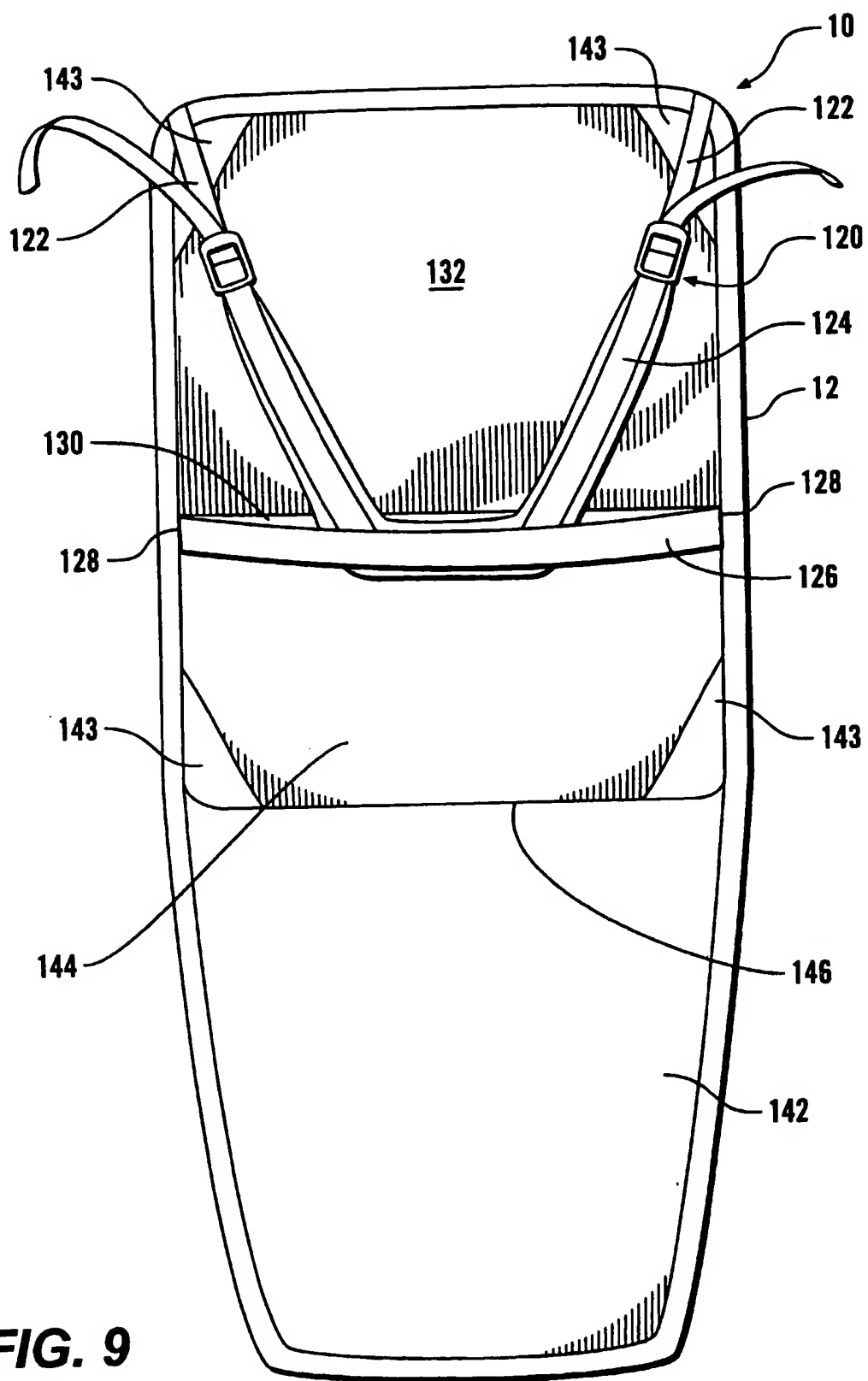


FIG. 7



**FIG. 9**

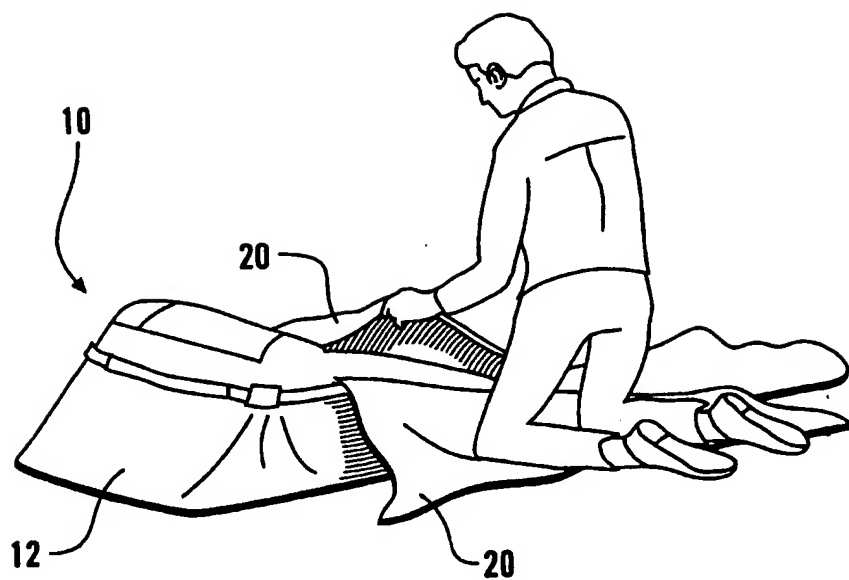


FIG. 10

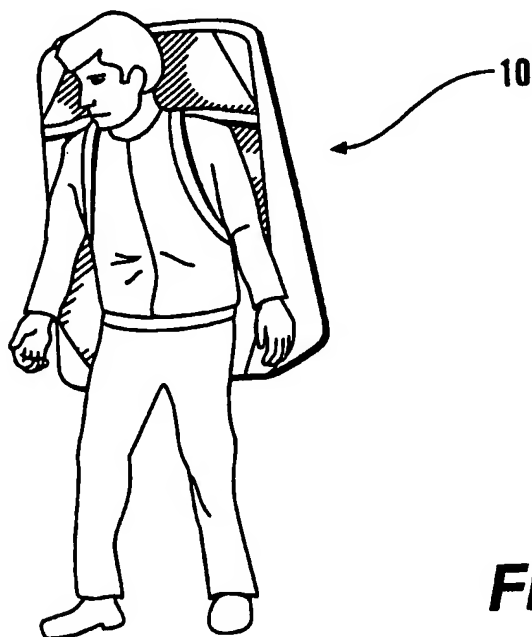


FIG. 11

1 COLLAPSIBLE HUNTING BLIND

FIELD OF THE INVENTION

The present invention relates generally to a portable shelters, and more particularly to portable hunting blinds that can accommodate a hunter in a supine position.

BACKGROUND OF THE INVENTION

Historically, it has been recognized by hunters that some form of concealment is advantageous when hunting game, whether it be larger mammals or relatively smaller birds and the like. While mammalian sight is often not exceptionally keen, particularly in the case of grazing animals such as deer, birds nearly universally have excellent eyesight due to their often airborne environment. Accordingly, while such relatively crude concealment as tree stands and scent means of various sorts may be effective in hunting deer and the like, far more sophisticated blinds are required when bird hunting, particularly in the case of waterfowl such as ducks and geese where typically little concealing cover is available to hunters in the typically marshy wetlands favored by such birds.

Blinds which may be set up in the field and covered with camouflage are known, with such blinds having hinged covers swingable to an open position for exposing a field of view for shooting. U.S. Pat. Nos. 3,848,352 and 3,323,530 issued to Chester M. Sayles and R. A. Smith, respectively, disclose such hunting blind structures. The hunting blinds of both of those patents incorporate top covers which may be biased to an open position with the aid of resilient elastic bands or cords. The cover of the Sayles patent is hingedly mounted on a vertical post at such a level that a hunter may sit under it. The cover opens only to a generally vertical, upright position in a direction against the wind. Thus, with the blind of Sayles oriented properly so that the hunter is facing waterfowl as they land in their normal direction against the wind, the wind would be opposing the opening of the cover. The flexible top cover of the Smith patent relies upon a trip cord for release, and utilizes elastic cords attached to the edge of the blind structure which also serves as the pivot axis for the top cover. With this arrangement, it is very questionable as to whether sufficient leverage would be exerted by the elastic cords to pull the top cover fully open, without continuing manual assistance from the hunter inside the blind.

U.S. Pat. No. 4,751,936 to Zibble et al. addresses the problem of lying on the ground. However, the blind does not provide much comfort against the elements. Further, the large swinging door may be difficult to use in windy conditions, and may attract attention.

U.S. Pat. No. 4,751,931 to Zibble et al. addresses the problem of lying on the ground. However, the blind does not provide much comfort against the elements. Further, the large swinging door may be difficult to use in windy conditions, and may attract attention.

Thus, there is a need for a portable blind which can be collapsed to a compact transport assembly, is comfortable, and is rapidly and easily erected in the field.

SUMMARY OF THE INVENTION

The hunting blind of the present invention is generally a shell that can surround a hunter in a supine position. The shell is supported by a selectively collapsible frame. The frame forms a cockpit in which a hunter can enter the blind. The cockpit is where the hunter's torso is located when the hunter is in a supine position. In one embodiment, a liner is connected to the frame for forming a wedge to support the

hunter's torso in a slightly reclined supine position. To hide the hunter from prey, a pair of flaps are used to cover the cockpit. The flaps are connected to the shell with a fabric hinge. The flaps lay over the top of the open cockpit and easily open to the sides of the shell when the hunter moves from a supine position to a sitting position for shooting.

In one embodiment, the hunter's face can be covered by a mesh screen, and the bottom of the shell is lined with an insulating material. There may also be stubble straps located on the outside of the shell for attaching vegetation to the blind.

The portable blind can be transported by collapsing the frame and folding the blind. A backpack assembly is located on the bottom surface of the blind so it is easy to carry in the field.

Various other features, objects, and advantages of the invention will be apparent to those skilled in the art from the following detailed description including illustrative examples setting forth how to make and use the invention.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a perspective side view of the blind of one embodiment of the present invention in an open non-collapsed position;

FIG. 2 is a perspective side view of the blind of FIG. 1 having one flap in a closed position;

FIG. 3 is a view of the collapsible frame used to support the blind of FIG. 1;

FIG. 3A is a detail view of an alternative embodiment of the head rest portion of the collapsible frame;

FIG. 4 is a perspective side view of the blind shown in FIG. 1 with a portion of the frame shown in a disassembled state;

FIG. 5 is a plan view of the blind of FIG. 1, with the flaps not shown in the view for ease of viewing the interior construction;

FIG. 6 is a partial side cross-sectional view of the blind of FIG. 1;

FIG. 7 is a rear elevation of the blind of FIG. 1;

FIG. 8 is an isolated view of the one of the flaps used to cover the blind shown in FIG. 1;

FIG. 9 is a bottom elevation of the blind of FIG. 1, showing one embodiment of the backpack assembly;

FIG. 10 is a perspective side view of the blind of FIG. 1 as it is being assembled from the collapsed position; and

FIG. 11 is the blind of FIG. 1 shown in a collapsed position on a person's back.

DESCRIPTION OF THE PREFERRED EMBODIMENT

One embodiment of the present invention is the collapsible hunting blind 10 shown in FIG. 1. The blind 10 is generally constructed from a fabric shell 12 that is supported by a collapsible frame 14. When the frame 14 is in a fully extended position as shown, the blind 10 takes on a casket-like appearance. A hunter can easily enter the blind 10 and position himself in a comfortable and practical supine position. A body support 16 is inclined upward from the floor of the blind, and a weapon support 18 is provided by frame 14. The hunter's feet and other gear may fit in the large foot box located at the end 19 located opposite the body support 16. A pair of flaps 20 are used to cover the opening 22 of blind 10 to hide the hunter. Flaps 20 can be easily opened as the hunter sits up or extends his or her arms.

The frame 14 provides the primary structural support for the shell 12. Referring to FIG. 3, frame 14 is generally

constructed from certain frame components: a ground piece 30, a head rest 32, a gun rest 34, a pair of braces 36, and a pair of telescoping braces 38. Ground piece 30 is a rectangular piece wide enough to accommodate the average hunter sitting therein. Head rest 32 is a U-shaped piece that is rotatably connected to ground piece 30 at a short distance from one end, end 41. Preferably, brackets such as nylon brackets 40 are used to make the rotatable connection. Brackets 40 wrap around the circumference of ground piece 30, and have a pair of upwardly angled fins 31 for receiving a bolt and a self-locking nut 33 extending from an end of head rest 32. Of course, other arrangements of the pieces to form the frame 14 may be used without departing from the invention.

The head rest 32 may be selectively held in an upward position with respect to ground piece 30 using braces 36. Braces 36 are rotatably connected to head rest 32 with brackets 42. (Brackets 42, 44a, 44b, 46 and 48 discussed herein may be the same type as bracket 40 or other configuration.) The opposite end of brace 36 is also rotatably connected to ground piece 30 at brackets 44a. Preferably this connection can be released with relative ease so that the head rest 32 can be selectively collapsed against ground piece 30. In one embodiment, head rest 32 has a dropped middle 45 at a top portion of the brace (see FIG. 3A). Dropped middle 45 is designed to accommodate a cushioning pad described herein.

Gun rest 34 is also a U-shaped piece that is rotatably connected to ground piece 30 at a short distance from one end, end 50. Preferably, brackets such as nylon brackets 46 are used to make the rotatable connection. The gun rest 34 is selectively held in an upward position with respect to ground piece 30 by tension in the shell 12. Braces 38 are rotatably connected to gun rest 34 using brackets 48. The opposite ends of braces 38 are also rotatably connected to ground piece 30 at brackets 44b. Each brace 38 is telescoping, and has a snap button 52 locking mechanism to keep it in an extended position. The brace can be shortened by depressing snap button 52 to allow the gun rest to fold down toward ground piece 30.

Ground piece 30, head rest 32 and gun rest 34 preferably have radiused corners so as not to unduly stress the fabric shell 12 but other shapes could be used. Frame 14 may be constructed from a tubular material such as high-tempered aluminum or other shapes and materials. The frame aluminum material has the characteristics of having a good strength to weight ratio, being noncorrosive, and being capable of supporting the hunter's torso weight at head rest 32.

Referring now to FIG. 4, shell 12 is generally constructed from an outer casing 60 and a partial inner liner 62. Preferably, the casing 60 and liner 62 are made from a tough, water proof fabric such as 900 denier polyester with a polyurethane coating. The casing 60 floor may be constructed from the same fabric or a different fabric such as an 1800 denier polyester with a waterproof coating. Of course, other suitable materials could be used to construct the casing 60 and liner 62.

As shown in FIGS. 1, 2, 4, and 5, casing 60 and liner 62 are constructed to receive frame 14 in a disassembled state. In the upper portion 64 of blind 10, liner 62 is propped up during assembly to form a wedge 65 (see FIG. 1). Wedge 65 is a "hammock" style rest where the torso of a hunter will lie against when occupying blind 10. Further, the interior volume of wedge 65, accessible by a zipper closure or the like, is useful for storing and transporting decoys, clothing, etc., when the blind is in a semi-collapsed state. In the lower portion 66 of blind 10, the liner joins together with casing 60 so that the hunter's legs and feet will lie on the ground. In one embodiment, some type of insulation such as closed cell

foam is provided between the casing 60 and liner 62 in the lower portion 66 so that the hunter is less affected by cold and/or rough ground. Likewise, liner 62 located in the upper portion of blind 10 may be backed with an insulator such as closed cell foam. Because the upper portion 64 of liner 62 is separated from casing 60 to form the wedge 65, liner 62 may be backed by a secondary liner (not shown) to enclose the closed cell foam underneath the top surface 68 of this portion of liner 62. Padding 69 such as closed cell foam is connected to the top section 67 of shell 12, and wrapped around and secured to gun rest 34. The padding 69 will protect a gun barrel's ventilated rib from being scratched or damaged and helps to maintain the position of the gun.

Referring now to FIGS. 4 and 5, the structure of upper portion 64 is described more fully. In one embodiment of blind 10, the top surface 68 has the following features. First, a zipper 70 is placed near each side of blind 10. When zippers 70 are completely unzipped, the hunter can gain access to the inside of wedge 65 to assemble the frame 14, take down the head rest or to use the storage space. Second, a padded head rest 72 made from a relatively thick piece of closed-cell foam may be located at the head rest 32. This padded head rest may be encased between a liner 62 and a fabric covering sewn thereto. Third, a pocket 74 may be sewn onto top of liner for storing items such as shotguns, flags, hunting licenses, and maps. The insulation attached to the liner 62 may be between zippers 70. The insulation may be one solid piece, or may be attached in segments for desired flexibility. For example, FIG. 5 shows the insulation connected to a first segment 76 and a second segment 78. Further, there is a flexural joint 80 formed at the small area separating the segments 76, 78.

Referring now to FIGS. 6 and 7, the relationship between the shell 12 and frame 14 in an assembled position is shown. Generally, a strap 90 is connected to the gun rest 34 and is pulled taught so that shell forms a cockpit 91. Strap 90 keeps the sides 92 from sagging, and helps to support gun rest 34. Strap 90, made from nylon webbing or the like, is stitched or otherwise attached to the back side 94 and extends along both sides 92 of the cockpit 91 so that it can be connected to gun rest 34. On each side 92, strap 90 is fed through sleeves 96, that may be closed with hook and loop fasteners or other closing devices such as snaps. The strap end 98 is secured to the gun rest 34 with an "H" buckle or other securing device.

When the blind 10 is assembled and the flaps are closed, most of the frame 14 cannot be viewed past liner 62. There are apertures (not shown) in liner 62 at points where braces 38 extend toward the gun rest 34. Access to the hidden portion of frame 14 may be obtained by opening zippers 70 as seen in FIG. 5.

The flaps 20 may be seen in FIGS. 1, 2 and 8. In one embodiment, flaps 20 are generally constructed from closed cell foam lined with nylon fabric and covered on the exterior by the same fabric as shell 12. Quilting 99 may be used to keep the foam stationary with respect to the fabric covering. The foam adds stiffness so that the flaps together form a lightweight door, and serves to insulate the hunter against cold weather. Additional stiffening members such as plastic cross or longitudinal members could be added. Each flap 20 has an elongated shape and is sized to adequately cover the cockpit 91 and hunter. Each flap 20 is connected to the shell 12 with a fabric "hinge" 102 that may run the length of the flap. A handle 104 may be attached to the inner surface of each flap 20 so that the hunter can more easily close each flap 20. The flaps 20 can be buckled closed with a quick release buckle 106 or other closing device located on the exterior surface of the flaps 20, as seen in FIG. 2. An extra length of fabric 103 may extend beyond the quilted area containing the foam. Fabric 103 can drape downward onto

the shell 12 so flaps 20 look somewhat integrated with the shell, at least from a bird's eye view.

To hide the hunter's head while viewing the sky for birds, a mesh screen 110 may be used. Preferably, a screen 110 is removably attached to the top edge 108 of each flap 20. A hook and loop material 111, 112 is most useful for this as it can be configured to allow screen 110 to be attached in varied positions. Other securing mechanisms could be used.

Referring now to FIG. 9, the bottom of blind 10 has a backpack assembly 120 connected thereto. The backpack assembly may be constructed from two adjustable straps 122 connected to a yoke such as U-shaped yoke 124. The bottom of yoke 124 is secured to a horizontal strap 126 that is sewn directly to the shell at each end 128. The attachment of strap 126 to shell 12 may be reinforced by an additional strap 130 sewn directly to the bottom surface 132 of shell 12. There are other backpack assemblies that could be employed for the purpose of carrying the folded blind 10 on a hunter's back, and the invention should not be interpreted as being limited to the assembly shown in FIG. 9.

Referring still to FIG. 9, foam may be used to insulate floor or bottom surface 132 of blind 10 and is installed in two separate pieces. Foam pieces are indicated by reference numbers 142 and 144. This creates a fold "line" 146 where the blind 10 can easily bend. The fold line 146 is naturally located adjacent the edge of ground piece 30, which is approximately near the mid-length point, but may extend closer to the foot box. Further, for added durability, the corners of the surface 132 may be reinforced with a fabric piece 143. This is used to prevent undue wear to the shell 12 caused by rubbing the ground piece 30 against the ground.

Referring now to FIGS. 1, 2 and 7, in one embodiment of the present invention, stubble straps 150 are applied to the exterior surface of blind 10. The purpose of the stubble straps 150 is to provide a way to attach grasses, branches or other vegetation to the exterior of the blind for increased camouflage. Stubble straps 150 may be made from continuous strips of nylon webbing or the like, stitched periodically to shell 12 at stitches 152. This will leave segments 154 for sliding the vegetation therethrough.

Referring to FIGS. 1 and 5, optional flap doors 160 may be located on each side of the cockpit so that the hunter can extend his arms out the side when lying in the blind to flag waterfowl. Preferably, the flaps are hinged at the top so that if open, rain is deflected away from the flap opening. In addition, a door may be located at end 19. A zipper 168 is preferably added for access to the foot box portion of blind 10. The zipper 168 access makes it easier to clean this area or access items stored in the foot box. Of course, other zippers or hook and loop fastened flaps could be added throughout the blind if desired.

In operation, the blind 10 is fully extended as seen in FIGS. 1 and 6. In this position, a hunter may climb into the open cockpit area and lie down so his feet are in the foot box, head is on head rest 16, and torso is against wedge 65. The hunter closes the flaps 20 so he may view the sky through mesh screens 110. If desired, vegetation can be placed into stubble straps 150 before the hunter is positioned inside blind 10.

Referring to FIGS. 10 and 11, to transport the blind, the hunter depresses the snap button 52 located on each telescoping brace 38, and pulls the gun rest 34 toward head rest 32. Prior to this step, the hunter may unzip a zipper 70 on surface 68 and store decoys or other items inside wedge 65. The flaps 20 are then buckled shut, and the foot box or end 19 is folded over the flaps 20 until it reaches the head rest 32. End 19 may be temporarily secured against head rest 32 by tying an elastic band (not shown) around stubble straps

adjacent to the end 19 and head rest 32. Other means of securing end 19 to the head rest 32 may be used. The blind 10 can now be carried on the hunter's back by placing the yoke 124 over his or her shoulders.

While the invention has been described with reference to certain embodiments, those skilled in the art will appreciate that certain substitutions, alterations, and omissions may be made without departing from the spirit of the invention. Accordingly, the foregoing description is meant to be exemplary only and should not limit the scope of the invention set forth in the following claims.

What is claimed is:

1. A hunting blind comprising:

a shell adapted to generally surround a hunter in a supine position;

a selectively collapsible frame for supporting the shell, wherein the frame and shell form a cockpit, wherein the frame further includes a head piece, a ground piece, a pair of telescoping braces that are selectively connected to the ground piece, and a gun rest,

wherein the gun rest is rotatably connected to the ground piece and connected to the pair of telescoping braces; and

at least one flap for covering the cockpit and for hiding the hunter, the at least one flap connected to the shell so that it is openable to the sides of the shell when the hunter moves from a supine position to a sitting position.

2. A hunting blind comprising:

a shell adapted to generally surround a hunter in a supine position;

a selectively collapsible frame for supporting the shell, wherein the frame and shell form a cockpit;

at least one flap for covering the cockpit and for hiding the hunter, the at least one flap connected to the shell so that it is openable when the hunter moves from a supine position to a sitting position;

wherein the frame comprises a rectangular ground piece, a pair of telescoping braces connected to each side of the ground piece, a pair of braces also rotatably connected to each side of the ground piece, a head rest rotatably connected to the ground piece and to the pair of braces, and a gun rest rotatably connected to the ground piece and to the pair of telescoping braces.

3. The hunting blind of claim 2 further including a liner connected to the frame for forming a wedge to support the hunter in a slightly reclined supine position, wherein the wedge has a selectively accessible interior volume.

4. A collapsible frame for a hunting blind comprising:

a ground piece having two opposite sides;

a pair of telescoping braces connected to each side of the ground piece at a first pair of brackets;

a pair of braces rotatably connected to each side of the ground piece at a second pair of brackets;

a head rest connected to the ground piece and to the pair of braces; and

a gun rest connected to the ground piece and rotatably connected to the pair of telescoping braces so at the telescoping braces retract, the gun rest rotates toward the head rest.

5. The frame of claim 4 wherein the first pair of brackets and the second pair of brackets are located adjacent to each other on the ground piece.

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